

SMALL HOMES

Data Book

1940
EDITION

PUBLISHED BY

NATIONAL HOME BUILDERS BUREAU, INC.

NEW YORK, N. Y.

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C. Stanley Taylor, Editor

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*Editorial Contents Only—300 Pages of Reference Data with Names of Sponsoring Organizations will be found listed on Back Inside Cover.

This Volume Containing 350 pages is Distributed for Ready Reference Use by 25,000 Leading Dealers, Builders, Mortgage Bankers and Utility Companies.

Published yearly by National Home Builders Bureau, Inc., 572 Madison St., New York.

DATA INSERTS—BY SUBJECTS

(See back inside cover for insert locations)

BRICK Structural Clay Products Institute.	National Mineral Wool Ass'n. Wood Conversion Company.	SIDING Modern Building Materials Co.
CLOSET FIXTURES Knappe & Vogt Mfg. Co.	KITCHEN American Stove Company. Berger Mfg. Div., Republic Steel Corp. Ebeco Mfg. Company. Edison General Electric Appliance Co. Ilg Electric Ventilating Co. In-Sink-Erator Mfg. Company. International Nickel Co., Inc. Victor Electric Products Company. Westinghouse Electric & Mfg. Co.	SCREENS American Brass Company. Wire Screen Cloth Manufacturers' Ass'n.
CEMENT Medusa Portland Cement Co.	LAUNDRY Bendix Corporation. Edison General Electric Appliance Co.	SHEET METAL BLDG. PRODUCTS American Brass Company. Berger Mfg. Div., Republic Steel Corp. Donley Brothers Company. Milcor Steel Company. Truscon Steel Company.
FINANCING Federal Housing Administration. Federal Home Loan Bank.	LIGHTING General Electric Co., Mazda Lamps.	TILE Davidson Enamel Company. Gibbs Boardtile Corp.
FIREPLACES Donley Brothers Company.	LATH, METAL Berger Mfg. Div., Republic Steel Corp. Milcor Steel Company. Truscon Steel Company.	WATERPROOFING Medusa Portland Cement Company.
FOUNDATIONS Medusa Portland Cement Co.	LUMBER Arkansas Soft Pine Bureau. National Lumber Manufacturers' Ass'n. Price Per Piece Tables	WINDOWS Andersen Corporation. Truscon Steel Company. Wire Screen Cloth Manufacturers' Ass'n.
GLASS Libbey-Owens Ford Glass Co. Pittsburgh Plate Glass Co. Pittsburgh Corning Corp.	PAINTING Chicago Paint, Inc. Lead Industries Ass'n. Medusa Portland Cement Company.	WIRING Adequate Wiring Bureau. National Electric Products Corp.
HARDWARE American Cabinet Hardware Corp. Casement Hardware Company. Knappe & Vogt Mfg. Co. McKinney Mfg. Company.	PLUMBING American Brass Company. Ebeco Mfg. Co. Edison General Electric Appliance Co.	WOODWORK Andersen Corporation. Arkansas Soft Pine Bureau. National Door Manufacturers' Ass'n. National Lumber Manufacturers' Ass'n. Wood Conversion Company.
HEATING Burnham Boiler Co. Donley Brothers Company. Holland Furnace Company. Perfection Stove Company. Weil-McLain Company.	ROOFS Carey, Philip Co., The. Celotex Corporation. Certain-Teed Products Corp. Lehon Company.	WOOD PRESERVATION National Door Manufacturers' Ass'n. Wood Treating Chemicals Company.
HOME PLANNING SERVICE Producers' Council, A.I.A., and F.H.L.B.		VENTILATION Ilg Electric Ventilating Company. Victor Electric Products Company.
INSULATION Carey, Philip Co., The. Celotex Corporation. Certain-Teed Products Corp. Kimberly-Clark Corp.		

NEWS FOR THE *Homebuilding Industry!*

NATIONAL HOME BUILDERS BUREAU, INC.

W. WADSWORTH WOOD, National Director



572 MADISON AVENUE, NEW YORK CITY

SMALL HOMES YEAR BOOK

Telephone: PLaza 5-8344

SMALL HOMES DATA BOOK

FELLOW MEMBERS of the
HOME BUILDING FRATERNITY!

Here is your copy of SMALL HOMES DATA BOOK.

This book has been created for lumber and building material dealers; their architects and contractors. It also serves as a reference guide for operative builders, home financing institutions, and the Home Service Departments of gas and electric companies.

This DATA BOOK is planned as a time-saver - presenting rapid reference information on all phases of home building. You will find it convenient to be able to refer to the pages in SMALL HOMES YEAR BOOK as hundreds of thousands of copies are being distributed through newsstands and dealers. Please note that this DATA BOOK which is planned for your own use, contains the complete consumer edition of SMALL HOMES YEAR BOOK. It is divided into Sections and complete information on products for the small home are bound in alphabetical order directly behind the editorial material on that subject. (See index on opposite page.)

The size and significance of this home building market has assumed gigantic proportions. You who will plan and build - who will finance and equip hundreds of thousands of moderate cost homes this year are like soldier in the front line trenches. You are in constant need of ammunition - which is dependable information such as that presented in this DATA BOOK.

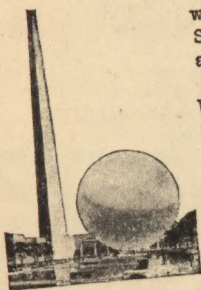
Home building is essentially a local industry - dealers and builders must carry on a continuous local sales campaign directed to individual prospects. One of the most effective selling 'tools' which you can employ is to present each prospect with a copy of SMALL HOMES YEAR BOOK imprinted with your name and address. These are available to you as explained on the following pages.

We trust that this DATA BOOK will prove not only of ready reference value to you but of real help in your conferences with prospective customers.

Sincerely yours,

W. Wadsworth Wood

Wood
Pres.



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SPONSORS OF
NUMBER ONE HOUSE
"Town of Tomorrow"

PLAN FOR INCREASING DEALER SALES ... SEE NEXT PAGES

BULK ORDER BLANK SMALL HOMES YEAR BOOK

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(Please Print Plainly)



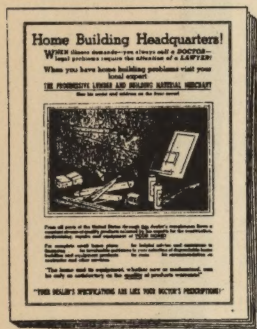
(Company Name)

(Slogan)

(Address)

(Telephone)

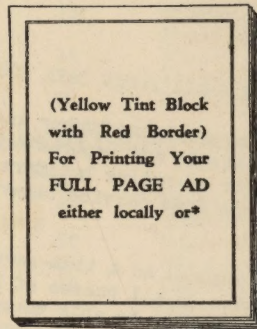
FRONT COVER (3 Lines Only)



1.



2.



3.

CHOICE OF THREE BACK COVERS

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100 to 500 copies 5c each

600 to 4500 copies 4c each

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* Our printer will print your Page Ad for \$25.00 extra. You furnish cuts, if required.

National Home Builders Bureau, Inc.
572 Madison Avenue
New York, New York

Gentlemen:

Please ship us, F.O.B. Chicago.....copies of SMALL HOMES YEAR BOOK

with our imprint on front cover and #.....back cover. We enclose our check

for \$.....in payment.

NOTE

Arrangements have been made
with practically all
State and Regional
LUMBER DEALER ASSOCIATIONS
to take these orders from members
Your order will be credited
to your own association!
(If officially selling Year Books)

Attention:.....

READ
THIS SALES PLAN
CAREFULLY!

Decide on the Back Cover
You Want

(see 3 choices on Yellow
Year Book Back Cover)

Tear out this page!

FILL OUT AND MAIL
THIS ORDER BLANK

DISTRIBUTE
YOUR IMPRINTED COPIES
AS SUGGESTED

Bring
the Buyers In!

Designed TO INCREASE DEALER SALES!

The Easiest, Most Practical and Cheapest Sales Tool" Ever Offered!

The new 1940 edition is on the newstands from coast to coast! The new dealer edition is ready to be imprinted for you!

Every copy of this vast issue is a 100% "dealer helper". Just read the editorial quotations at the right. If you were a prospective homebuilder—who would visit? Remember that through newsstand and dealer distribution hundreds of thousands of prospective homebuilders read SMALL HOMES YEAR BOOK. They cannot help but be impressed by this emphasis on the progressive lumber and building material dealer as the expert on all homebuilding problems in his community. Read the advertisement on the outside back cover of this Year Book. This is the dealer's story in a few words. This is also the optional back cover of your own imprinted copies of the Year Book as offered on the opposite page. Here is your own house organ to be distributed as widely as you please in your own community—identifying you by your name on the front cover as one of the progressive dealers. Your newsstand circulation and national publicity program are rapidly establishing the dealer's rightful position as "homebuilding headquarters"! It is clearly up to you to 'cash in' on the tremendously powerful program which we are setting in motion for you.

Sample Copy on Request.

Read on the Next Page—

How

These imprinted copies are real 'sales tools' for your business. Distributed to your homebuilding prospects they will be studied many times—each time helping to create a customer for you!

How

They are being sold in quantities at amazingly low prices as shown on the opposite page. Sales to dealers are being handled officially through all leading State and Regional Associations. Ask the opinion of your own Secretary. He is thoroughly familiar with the Small Homes Year Book. He will recommend the use of imprinted Year Books as an important feature of your sales campaign.

Typical Editorial Comments 1940 SMALL HOMES YEAR BOOK

From
Page 66.

1,000,000
Copies
Carry
This Advice

FOR Mr. and Mrs. America there is a very real short cut toward the solution of most of these problems. A visit to a progressive local lumber and building material dealer's office will have surprising results. He is no longer an order-taker sitting in his dingy office waiting the call for some two-by-fours and cement. He is a live local merchant who has taken his place in his community as an expert on problems related to the building of a moderate cost home. If Mr. or Mrs. America or any of the little Americas get sick, they naturally go to a doctor. If Mr. America gets into legal difficulties he seeks a lawyer, or if he needs a loan he goes to a bank. Similarly the prospective home builder is learning to take his problems to this local expert who understands these difficulties.

American home builders are learning rapidly that the modern lumber and building material dealer not only is able to furnish a variety of stock plans and, of course, most of the materials and equipment for a home building project, but he is also well able to advise on financing, mechanical equipment and practically every other problem which confronts the Americas—who-are-about-to-build-a-home.



There is an expert in your community to whom you should take your home building problems—he is the progressive lumber and building material dealer—his specifications are like a doctor's prescription—you can follow them confidently.

From Page 5

You will find that your lumber and building material dealer has a service which extends far beyond the sale of building materials and equipment.

Never in the history of our country were the joys and practical economies of home ownership so easily available to millions of American families as they are today. Financing is made easy as fully described beginning on Page 25. There is a broad selection of low cost home plans easily available to you. Your local lumber and building material dealer is prepared to help you in advice on planning, financing, selecting your contractor and providing all the necessary information which you require in connection with your problem. Naturally this dealer thoroughly understands all problems of home building. He knows market conditions—which means he can recommend the best of materials and equipment which combine with economy to create a satisfactory home investment.

*Last Year
Over 1200 Dealers
Increased Their Sales!*

BY DISTRIBUTING
NEARLY 400,000 IMPRINTED COPIES OF



Designed TO INCREASE DEALER SALES!

(continued from preceding pages)

On preceding pages we have told you briefly of the dealer 'boosting' editorial contents of the new 1940 Spring Edition of the Year Book. We have explained how at amazingly low prices you can get quantities of this edition imprinted with the name and address of your own firm. ! Now read

How Year Books Get Business For YOU!

Here are some suggestions as to how a dealer may use his imprinted copies of the Small Homes Year Book as immediate business-getting forces.

We recently had a letter from Hawley W. Wilbur, Secretary-Treasurer of the Wilbur Lumber Company, West Allis, Wisconsin.

"I certainly want to congratulate you on your new 1940 Year Book. It is valuable because the information contained in it is authentic, honest and unbiased. Last year we used 4000 copies:

1. To give to people at demonstration homes in exchange for their name, address and approximate date they expected to build.
2. As bait in advertising to draw new prospects to our yard we offered this 25 cent book for 10 cents with Coupon properly filled out.
3. We gave books to people who would like to build but never had the courage to go ahead.
4. For salesmen to use as sales manuals.

"This year we will use approximately 20,000 copies in connection with a special home promotion at the Milwaukee Home Show in March."

In addition to the above uses there are others:

DIRECT MAIL

To your own prospect list and in answering inquiries.

THROUGH CONTRACTORS

Give each of your contractor-customers copies for their own use in selling.

YOUR SALESMEN

As practical and valuable gifts to prospective homebuilders.

LOCAL DISTRIBUTION

Place copies in the hands of your local realtors, mortgage lending institutions and utility companies. Place them as interesting reading matter in the offices of doctors and dentists. Wherever they appear under your imprint they stamp your organization among the leaders of your community.

.....
You will think of other uses for your Year Books because they fit into every type of sales promotion in the homebuilding field.

Now Officially Approved

BY STATE AND REGIONAL DEALER ASSOCIATIONS

When you send in the order blank herewith we immediately notify your Association and credit the sale to that organization. Official arrangements have been made with leading lumber and building material dealer associations from coast to coast to handle sales of imprinted Year Books to members. Additional order blanks can be obtained from us— or your own Secretary!

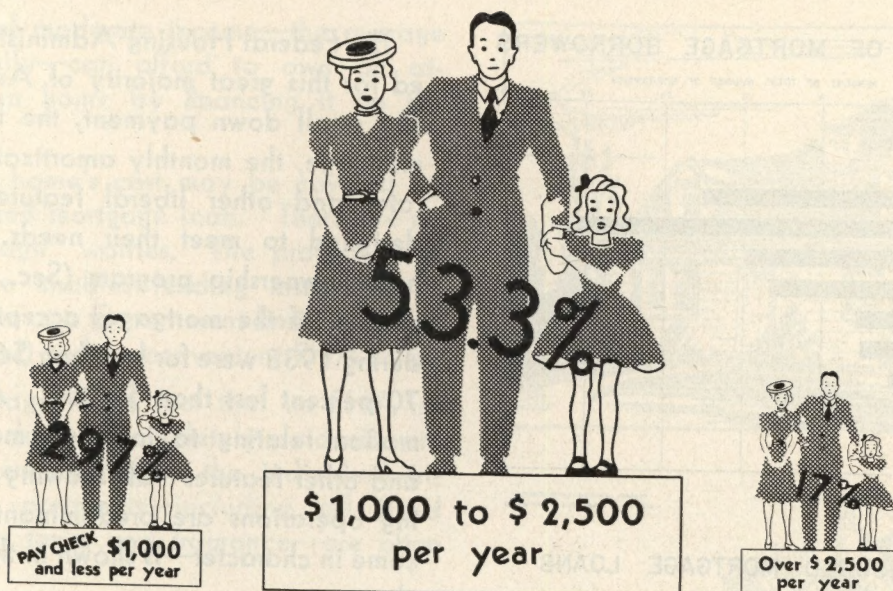
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NATIONAL HOME BUILDERS BUREAU, INC.

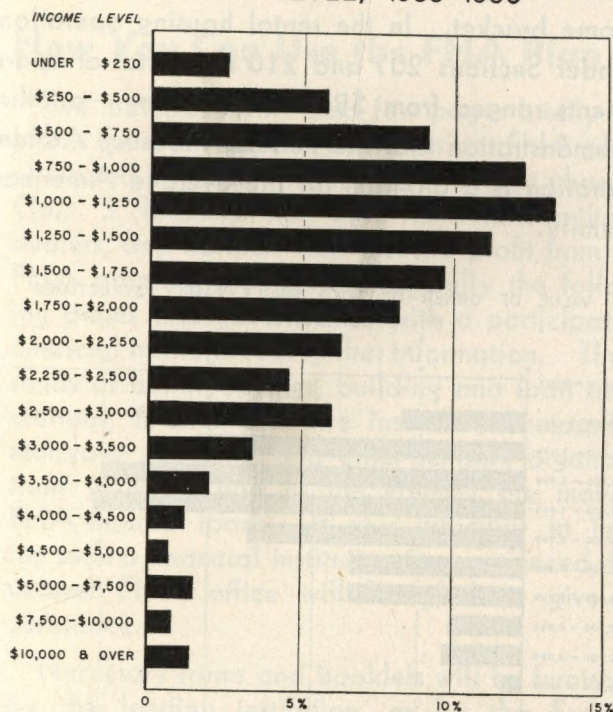
572 MADISON AVENUE

NEW YORK CITY

HERE IS THE HOUSING MARKET



PERCENTAGE DISTRIBUTION OF FAMILIES IN URBAN AND NONFARM COMMUNITIES BY INCOME LEVEL, 1935-1936



Any discussion of housing must take into account the *housing market*.

No one can say definitely what the U. S. housing market is today, but the available facts are clear guideposts.

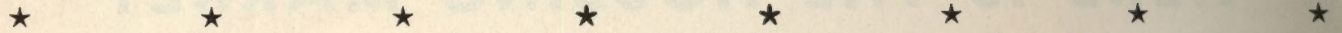
The building industry recognizes that its successful approach to volume business today is the moderate-price home, financed under the FHA Plan. Income statistics conclusively prove that the *small* home market is the *largest* market for homes . . . and sales experience the country over demonstrates that FHA terms are the most effective means of making buyers out of prospects in this field.

These are income averages for the country as a whole, and the picture becomes even more significant when the comparatively few large metropolitan centers are eliminated. There is a sizable luxury market in the big cities and scattered here and there in smaller communities. But in by far the greatest number of cities and towns this is merely an ornamental fringe to the great bulk of the moderate income market—easily 65 percent of the total.

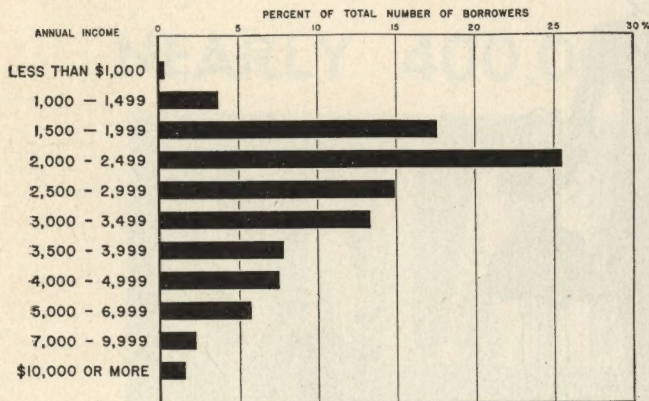
DATA FROM: CONSUMER INCOMES IN THE UNITED STATES
NATIONAL RESOURCES COMMITTEE

FEDERAL HOUSING ADMINISTRATION
DIVISION OF ECONOMICS & STATISTICS

The FHA Program and the Small Home Market



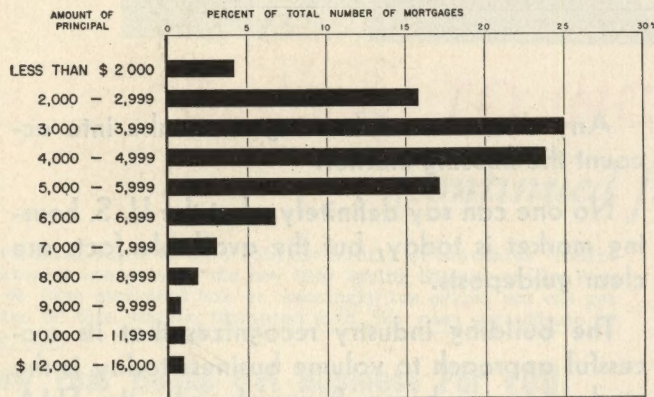
ANNUAL INCOME OF MORTGAGE BORROWERS



SOURCE: PREMIUM-PAYING MORTGAGES INSURED DURING 1938

FEDERAL HOUSING ADMINISTRATION
DIVISION OF ECONOMICS & STATISTICS

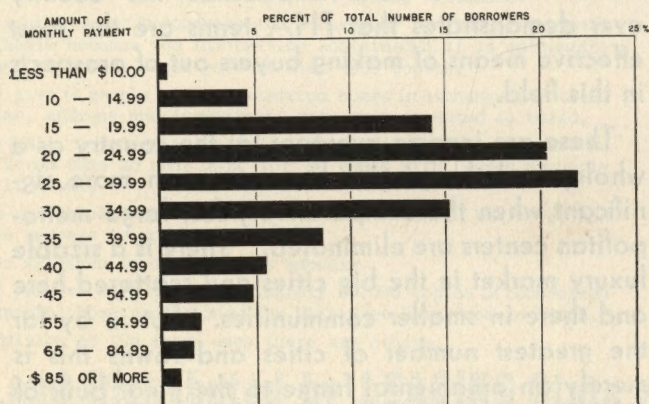
SIZE OF INSURED MORTGAGE LOANS



SOURCE: MORTGAGES ACCEPTED FOR INSURANCE DURING 1938

FEDERAL HOUSING ADMINISTRATION
DIVISION OF ECONOMICS & STATISTICS

MONTHLY MORTGAGE PAYMENT OF BORROWERS



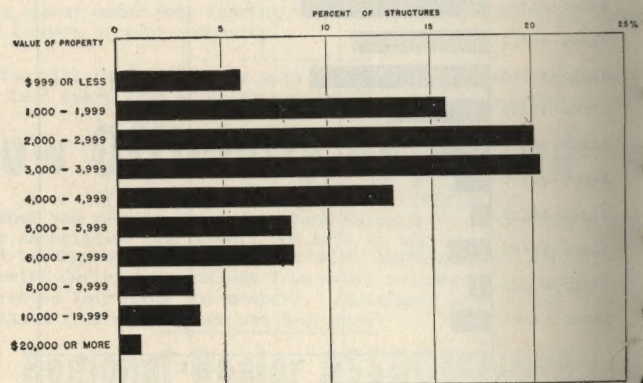
SOURCE: PREMIUM-PAYING MORTGAGES INSURED DURING 1938

FEDERAL HOUSING ADMINISTRATION
DIVISION OF ECONOMICS & STATISTICS

The Federal Housing Administration was created for this great majority of American families. The small down payment, the long term of the mortgage, the monthly amortization, low interest rate, and other liberal features are expressly designed to meet their needs. Under FHA's home ownership program (Sec. 203), about 85 percent of the mortgages accepted for insurance during 1938 were for less than \$6,000, with about 70 percent less than \$5,000. Additional information relating to incomes, monthly payments and other features—all showing that FHA insuring operations are predominantly moderate income in character—is shown in the accompanying charts.

In modernization and repair notes insured under Title I of the National Housing Act the average loan in 1938 was around \$450, which places this phase of the FHA program in the moderate income bracket. In the rental housing operations under Sections 207 and 210 the rental of apartments ranged from \$8 to \$13 a room—another demonstration that the Federal Housing Administration is a program for the average American family.

VALUE OF OWNER-OCCUPIED SINGLE-FAMILY STRUCTURES IN 90 PLACES, 1934-1935



SOURCE: REAL PROPERTY INVENTORIES

FEDERAL HOUSING ADMINISTRATION
DIVISION OF ECONOMICS & STATISTICS
AUGUST, 1939

How a Family With a MODERATE INCOME Can Afford to OWN a HOME

The family of moderate income—the average American family—can afford to own an attractive, modern home by financing it on the FHA Plan.

Most of the home's cost may be covered by one FHA-insured mortgage loan. There are no "second mortgage" worries. The protection of FHA insurance enables lending institutions to offer these loans at a Government-limited interest rate (4½ percent) and on convenient FHA terms.

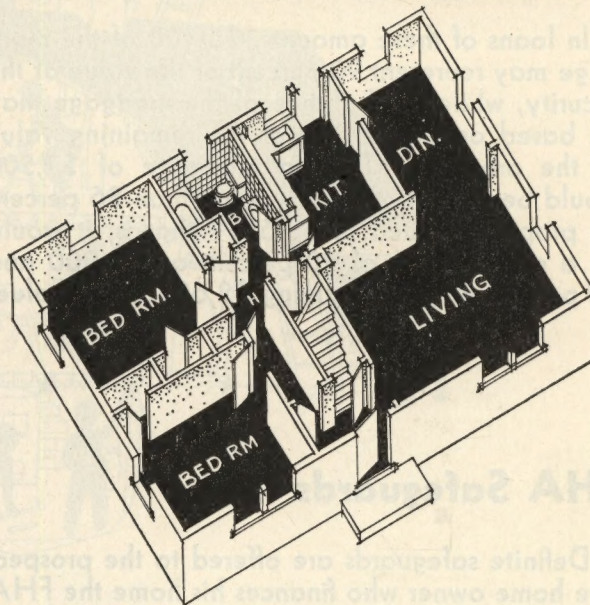
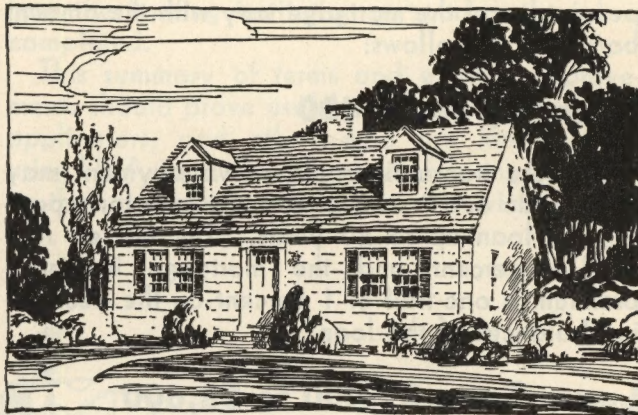
Chief advantage is the fact that an FHA-insured mortgage loan is completely paid off with monthly payments suited to the individual income. These payments—including all fixed charges such as taxes and insurance—are often less than rent.

At the right is an example of how a small home may be financed. Terms for financing various cost homes, and safeguards which apply to all homes financed on the FHA Plan, are also described in these pages.

How You Can Use the FHA Plan

The material in the next few pages briefly explains the main features of the various FHA plans of insured financing, including the newest phase—Class 3 loans under Title I. Manufacturers, dealers, and builders who want to profit from the FHA program should read carefully the following pages and get in touch with a participating financial institution for further information. Thousands of banks, savings, building and loan associations, finance and life insurance companies, mortgage concerns, and other lending organizations in every part of the country are making FHA-insured loans. If any difficulty in finding such a financial institution is experienced, the nearest FHA office will be glad to give its assistance.

Necessary forms and booklets will be furnished by the lending institution, or by the Federal Housing Administration.



Here is a typical example, based on a 10 percent down payment, a 25-year term, and 4½ percent interest.

Appraised value of property	\$5,000.00
Down payment	500.00
FHA-insured mortgage	4,500.00
Monthly payment (average)	26.15

(This estimated monthly payment includes principal, interest, and mortgage insurance. For added convenience, the annual local taxes and hazard insurance may be divided by twelve and included in the monthly payment.)

LOANS FOR HOME OWNERSHIP (Title II, Sec. 203)

★ ★ ★ ★ ★ ★ ★ ★ ★

Under this FHA Plan a prospective home builder may borrow up to \$16,000. The term and percentage of the mortgage vary with the amount borrowed, as follows:

Loans up to \$5,400

In these transactions the down payment may be as little as 10 percent and the term for repaying the loan up to 25 years. The interest rate is $4\frac{1}{2}$ percent and the mortgage insurance premium is one-half of 1 percent on the decreasing balances of the loan.

Loans From \$5,400 to \$8,600

In loans of these amounts, \$5,400 of the mortgage may represent 90 percent of the value of the security, while the balance of the mortgage may be based on 80 percent of the remaining value of the property. Thus, a mortgage of \$7,500 would be a loan of slightly more than 86 percent on property valued at \$8,625—that is, it would be a combination of 90 percent on \$6,000 and 80 percent on the remaining \$2,625 of the value.

★ ★ ★ ★ ★ ★ ★ ★ ★

FHA Safeguards

Definite safeguards are offered to the prospective home owner who finances his home the FHA way.



FHA 4

The term of such loans may be up to 20 years, the interest rate $4\frac{1}{2}$ percent, and the mortgage insurance premium one-half of 1 percent.

Loans From \$8,600 to \$16,000

The mortgage in these cases cannot be more than 80 percent of the value of the security. The term of the loan is up to 20 years, the interest rate is $4\frac{1}{2}$ percent, and the mortgage insurance premium one-half of 1 percent on decreasing balances.

In all three of the foregoing types of transactions there are certain initial fees such as recording and title examination expenses, an FHA appraisal fee of \$3 per \$1,000 of the original principal amount of the mortgage (with a minimum of \$10), and an initial service charge, paid to the financial institution (not more than $2\frac{1}{2}$ percent of the amount of the loan).

Houses intended for the occupancy of from one to four families may be erected under the provisions of Section 203. The land may be held in fee simple or under long-term lease.

Good Design

Home plans are checked for good room arrangement, pleasing design, and suitable specifications.

Sound Construction

Several inspections are made during the construction of a new house to see that plans and specifications are followed.

Desirable Neighborhood

FHA also checks utilities, zoning laws, transportation, schools, churches, shopping and recreational centers, and general character of the neighborhood. All these elements that make the loan a good "risk" safeguard the borrower's investment and contribute to the family's enjoyment of the home.

FHA-INSURED MODERNIZATION and HOME OWNERSHIP LOANS UP TO \$2,500

★ ★ ★ ★ ★ ★ ★ ★

FHA-insured Title I loans up to \$2,500 are being made by qualified lending institutions in all sections of the country. These loans may be used to repair and improve property; to install certain types of permanent equipment; and to construct various types of buildings.

Monthly payments may be arranged to suit the buyer, but the seller receives cash payment

from the lending institution as soon as the job is completed.

This summary of terms and eligible improvements should prove useful to dealers, contractors, applicators, and others who are interested in using FHA-insured modernization loans to broaden their opportunities for sales or services.



CLASS 1 LOANS

... For Altering, Repairing, and Remodeling Existing Structures

Class 1 Loans apply to existing structures only. They may be used for the types of improvements and for the installation of equipment listed below. The financing charge cannot be more than \$5 discount per \$100 on a 1-year, monthly-payment note, and the repayment time may be up to 3 years.

Class 1 Loans May Be Used for:

Repairs.—Including carpentry, roofing, masonry, electrical, and plumbing repairs, etc.

Remodeling.—Any structural change may be made, such as putting up or removing partitions, building additions, making "new" rooms out of unused attic or basement space, building porches, sunparlors, etc. One type of building may also

be converted into another type. For example, a single-family house could be converted into apartments.

Redecorating.—Floors, walls, and woodwork can be refinished with paint, plaster, wallpaper, etc. New floors can be laid.

Modernizing.—Cabinets, shelves, and other conveniences can be built in. New plumbing, heating, and wiring systems may be installed, or old ones modernized. Septic tanks, cesspools, wells, together with pumping equipment, etc., are also eligible.

Landscaping.—The ground on which the building stands may be improved by grading, laying walks, building fences, and planting.

A Partial List of Eligible Equipment

Home Improvements . . .

Boilers as a part of the heating system.
 Coal stokers.
 Doors (including storm doors and windows).
 Driveways.
 Fences.
 Heating systems.
 Heat control devices as a part of the system.
 Landscaping.
 Lighting systems.
 Lighting fixtures if a part of the system.
 Linoleum when cemented to the floor.
 Oil burners.
 Plumbing systems.
 Radiation, if part of the heating system.
 Termite control.
 Ventilating systems.
 Walks.
 Water heaters as a part of the water system.
 Water softeners as a part of the water system.
 Wells and cisterns.

Built-in—

Breakfast nooks.
 Bookcases.
 Cabinets.
 Closets.
 Cupboards.
 Incinerators.
 Laundry chutes.
 Laundry tubs.
 Lightning rods.
 Medicine cabinets.
 Mirrors.
 Ironing boards.
 Shelves.
 Ventilating fans.

Commercial and Miscellaneous Equipment . . .

Built-in—

Air-conditioning systems.
 Ash-removal equipment when part of the heating system.
 Barn pens.
 Bins.
 Booths.
 Burglar-alarm systems.
 Dust collectors.
 Elevators.
 Escalators.
 Fire-alarm systems.
 Fire escapes.
 Fire-hose systems. (Mounted on reels and permanently attached to the water system.)
 Sprinkler systems.
 Stalls.
 Troughs.

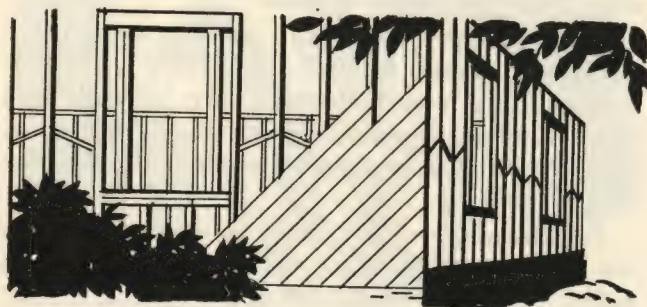
The exclusion of any item or work from this list does not in itself imply that it is ineligible. If a specific ruling is desired about any questionable item, the request, preferably accompanied by descriptive, illustrated literature, should be forwarded to the Federal Housing Administration, Washington, D. C.

These Types of Buildings May Be Improved . . .

Homes.	Churches.
Apartment houses.	Manufacturing and industrial plants.
Multiple-family houses.	Hospitals.
Hotels.	Orphanages.
Office buildings or other commercial buildings.	Schools.

CLASS 2 LOANS

Class 2 Loans are for financing new structures, not used for residential purposes. The Government-limited financing costs cannot be more than



\$5 discount per \$100. The time limit for non-agricultural buildings is 3 years; for agricultural buildings, 15 years. Loans in this class may be used for building detached:

Barns.	Granaries.
Service buildings.	Tourist cabins.
Gasoline stations.	Various other industrial and commercial buildings.
Garages.	

The cost of equipment used to operate the business which the structure houses is not eligible, but the cost of equipment eligible under Class 1 may be included in the loan. Example: Pumps for a gas station are not eligible, but a heating system for the station is eligible.

CLASS 3 LOANS

A *New Plan* under Title I program makes it possible to build small homes with loans up to \$2,500 . . . payable in regular installments over a period up to 15 years . . . with an initial down payment of 5 percent (cash or land).

Simplified Requirements . . .

The standard FHA requirements of design, construction, and land use have been greatly simplified for these new loans. This permits the financing of more modest homes for families of moderate income, in smaller towns and rural areas, and in communities where zoning restrictions and building codes are not too rigid.

Low Monthly Payments . . .

The long term of the loan brings the monthly payments to a low figure—as little as \$20.90 a month (not including taxes and hazard insurance) for a \$2,500 home.

Moderate Financing Cost . . .

The financing charge and fees are limited by FHA regulations and are reasonable for loans of this size and type. The one loan may serve both for construction and permanent financing but no part of the loan may be used to purchase land. To save time and expense, the process of obtaining and handling these new Title I loans has been made as simple as possible.

QUESTIONS and ANSWERS

(Typical points concerning the Class 3 program brought up by prospective home builders)

1. *How much may I borrow?*
Up to \$2,500.
2. *How long may I have to repay?*
Up to 15 years.
3. *What is the down payment?*
At least 5 percent of the value of the completed property (house and land).
4. *What is the financing charge?*
The "top" is \$3.50 discount per \$100 per year.
5. *Are there any other expenses?*
Yes; the usual initial fees for title search, appraisal, examination, etc.

6. *Must the down payment be in cash?*
Cash or land.
7. *What security must I give?*
A first mortgage.
8. *May I buy land or furnishings with the loan?*
No.
9. *How do I repay the loan?*
In equal monthly (or other regular) installments.
10. *What size lot must I have?*
Depends on what water and sewer services are available.
11. *What property requirements must be met?*
Simple standards to insure livability and to meet local building conditions.
12. *May I sell my property?*
Yes.
13. *May I get a loan to build a summer cottage?*
Yes.
14. *What personal requirements must I meet?*
Good credit standing and enough income to meet the payments comfortably.
15. *What forms do I fill out?*
A Credit Statement-Application and several other forms.



HOW A TYPICAL CLASS 3, TITLE I LOAN WORKS OUT . . .

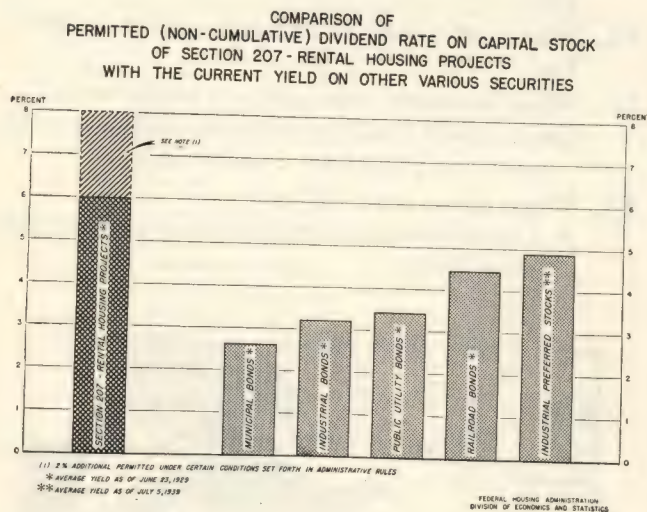
Estimated value of land and building . . .	\$2,650
Value of land	150
Cost of house (maximum loan)	2,500
Monthly payments, including principal and finance charge (taxes and hazard insurance extra)	20.90
Loan completely paid off in	180 months

RENTAL HOUSING (Sec. 207)

This is a plan for financing the erection of multi-family rental housing projects, either in the form of apartment buildings or individual residences. If desired, it may be arranged for individual dwellings to be released from the blanket mortgage and sold.

The rental housing program under Section 207 of the National Housing Act is an attractive means for individuals, estates and others to create a safe, stable investment paying an income comparing favorably with those obtainable from other sources. In addition, the amortization of the mortgage steadily increases the equity so that in time the project is owned outright.

To the building industry, projects under Section 207 offer opportunities for quantity use of materials, labor, technical skill, and equipment.



The Plan in Brief

Loans may be up to \$5,000,000 in amount and may run an extended period. The interest rate is limited to 4 percent per annum and it is required that periodic payments on interest, principal, and mortgage insurance be made by the mortgagor not less frequently than every 3 months. The mortgage must be completely amortized within its term.

The part of the property used for dwelling purposes shall not be mortgaged in excess of \$1,350 per room. The maximum mortgage percentage is limited to 80 percent of the amount the Federal Housing Administration estimates will be the value of the property when completed, provided that the mortgage will not in any event exceed the amount which the FHA estimates will be the cost of the completed physical improvements, exclusive of land and certain other items listed in detail in the regulations governing such loans.

The mortgagors under Section 207 may be private corporations, associations, cooperative societies, and other organizations, or Federal, State or municipal instrumentalities. A mortgagor other than a governmental organization is subject to FHA supervision of certain phases of its management such as the maximum dividends and salaries that may be paid, rents charged, etc.

Is Rental Housing a Profitable Investment?



6% TO 8%



LESS THAN 5%

The "Registered Home"

under the

FEDERAL HOME BUILDING SERVICE PLAN

A program to furnish needed technical assistance to the small home builder through the co-operation of mortgage lending institutions and all construction and home selling agencies.

With greatly liberalized financing on moderately priced houses, the construction industry faces a grave responsibility. It must prevent a wave of "jerry-building-for-quick-profit" which has so often characterized former boom building periods.

The ability to meet the challenge for better houses exists in the construction industry and allied professions, if it exists anywhere in the world. But that ability must manifest itself in a well defined plan whereby the customer who can afford a \$3,000 to \$7,500 house can secure as good a value as he gets in other basic national industries.

Such a plan is offered by the Federal Home Loan Bank Board. It was evolved through the operations of an agency of the Board, the Home Owners' Loan Corporation, which was forced to recondition nearly half of the million homes it refinanced before they could be considered adequate security. The HOLC revealed to the Board the full extent of shoddy construction; its other broad activities in the housing and home-financing field revealed only too clearly the loss of public confidence in home ownership and the necessity of regaining that confidence. Realizing that there is an immediate demand for 1,500,000 to 3,000,000 new small housing units, to say nothing of a demand for 500,000 new units each year—and that, on the other hand, thrift and home financing institutions are bulging with millions of dollars—the Board sought a program which would convince the public that home ownership is a safe investment in the future.

Although the Plan contemplates that the lender should lead the way to better building by establishing known procedures and by favoring excellence and discouraging shoddiness, all other participants in home construction can, and should play an important part therein. Such co-operation by aggressive, farsighted home building and home selling factors will produce sound housing of greater public acceptance, thereby laying the only sound foundation for an ever increasing volume of home construction.

The Plan does not presume to answer all the complex problems involved in the production of better homes, but it does point to the solution of many of those problems.

The following statement is intended to acquaint all participants in home construction with this program and to outline how they may profit by its distinctive sales appeal, and at the same time forward a movement aimed at the creation of better planned, better designed, and better built homes.



OBJECTIVES OF THE FEDERAL HOME BUILDING SERVICE PLAN

The Plan Serves the Mass Market

Recent income statistics indicate the great market for houses to be in the income brackets from \$1,000 to \$2,500. The Federal Home Building Service Plan is focused, therefore, on the mass market for houses costing less than \$5,000 to build, the overall objective being to make available to small home builders all essentials of an adequate home building service.

Generally, such service provides:

1. Sound financing counsel.
2. Economical small house design, suited to family needs, site and neighborhood, with adequate detailed working drawings, specifications and cost estimates, and competent architectural counsel from inception to completion of the house.
3. Specification of proper materials, and means for a check on those materials.
4. Assurance of a qualified builder.
5. Competent periodic supervision during construction by those not employed by the builder or contractor.
6. Registration of the house with the Federal Home Loan Bank Board, which identifies it as a quality product and establishes definite and dependable value in the small-house field.

In short, the Plan brings to the small home builder a greater measure of expert guidance from all sources—lenders, architects, material and lumber dealers, builders and realtors—and a simpler, more unified service than he ever before has been given.

Particular attention is called to the fact that the Plan is distinctly different from mine-run, national or local plan services which offer only stock-design and plans without regard to architectural counsel as to adaptability to site, to family requirements or to neighborhood, and which do not contemplate the mandatory technical supervisory service essential to good construction.

At the present time a variety of over 400 distinctive small house designs by residential architects are available to the various cooperating local programs in the form of a "Design Library"; but still

others may be submitted currently by participating local architects for local use only, or for inclusion in the "Library."

The Cost of the Service is Nominal

Inasmuch as some element of cost for technical service usually is involved in most building projects—if only for design—the fee for the architectural services rendered under the Plan certainly represents no innovation in customary lending procedures, and logically may be included in the investment upon which the mortgage loan is computed.

The fee for this valuable service is more than justified by the added attractiveness and sales value of the structure itself. Moreover, the architect may be able to effect savings in design, planning and construction which will exceed the cost of the entire service. The small home, no less than the soaring skyscraper is a better building—better to live in, better to look at, better built, better to own and better to sell—because of the participation of the architect. And the Plan provides this technical guidance at the lowest possible cost.

"Preferential" Lending Policies Applied to the "Registered Home"

While reputable builders endeavor always to supply a quality product regardless of mortgage lending practices, there has been, of course, no impelling incentive to improve design and construction when the same mortgage loan can be negotiated on an inferior house as on a quality house.

Lending institutions, however, are becoming more and more interested in methods of providing themselves with underlying security that will outlast their mortgage loans; and such an attitude, in addition, is indicative of a growing and intelligent concern in the borrower's welfare.

It follows, then, that only with the cooperation of other components of the construction industry to produce a superior product, can lending institutions actually adopt as a rule, rather than an exception, a policy of "preferential" lending with respect to quality construction, which under the Plan will be readily identified by the "Certificate of Registration."

A Complete Home BUILDING SERVICE

Experienced advice on problems of location, planning, construction and finance. Scores of attractive home designs.



Competent architectural guidance from start to finish, with construction carefully supervised as your home goes up.



A properly financed, well designed and soundly constructed home suited to present, as well as future, needs.



Home registration with Certificate to the owner as evidence of good planning and sound construction.



Introducing the HOME SELECTOR

AS LITTLE AS
\$32.00

PER MONTH

BUILDS AN ATTRACTIVE,
WELL PLANNED HOME



An entirely new and different plan portfolio, the 'Home Selector' contains a wide selection of distinguished small house designs, created by prominent architects. To guide you to the right design quickly, each is classified according to number of rooms and construction cost. Estimates of construction costs and basic material specification are also included.

Under the Federal Home Building Service, experienced architectural advice makes possible construction of these attractive houses at lowest cost . . . on monthly payments as low as \$32.00. Skilled planning, plus supervision of construction gives double assurance of a soundly built home . . . just as you imagined it.

Full details of this protective service are yours for the asking. Drop in and discuss your needs today . . . See these attractive, new home designs by leading architects.



CO-OPERATORS' SIGNATURES

INTERPRETING THE PLAN TO THE PUBLIC

A typical advertisement outlining the essential features of the home building service, with emphasis on the wide variety of architecturally planned home designs available through local co-operators.

FUNCTIONS OF THE NATIONAL SPONSORS IN RELATION TO THE PLAN

Under this joint program the Bank Board, The Institute and The Council are functioning cooperatively in sponsorship of the Home Building Service Plan. The sponsor's specific responsibilities with reference to operation and further expansion of the Plan are as follows:

The Federal Home Loan Bank Board urges and promotes the participation of mortgage-lending institutions, and encourages "preferential lending" treatment of loans on Registered Homes. The Board's Home Building Service Section at Washington administers the over-all development and operation of the Plan in selected localities; and its Field Representatives assist in the establishment of local facilities to operate the Plan. When homes are completed in accordance with the Plan's approved technical standards, the Board then issues the "Certificate of Registration" also certified to by the participating architect and lending institution.

The American Institute of Architects sponsors

the program to the profession and urges local participation not only of its members, but the entire profession and qualified technicians; advises and counsels concerning the development and dissemination of information regarding standards of design, working drawings, specifications and supervision requirements, in order that competent and satisfactory service may be rendered.

The Producers' Council, the national organization of manufacturers of quality building materials and equipment, urges and promotes the support of producers, their distributors and agents, and through them the support of local building material and equipment dealers, contractors and builders. The Council also seeks the cooperation of its affiliated national trade associations, some of which are now conducting their own better building programs. The Council is assisting the merchandising of the program and is supporting it with publicity and educational effort.

WHERE THE PLAN WILL OPERATE IN 1940

While it is planned ultimately to establish 12 regional offices for the purpose of extending the Federal Home Building Service Plan to all sections of the country, intensive activities of the Plan will be confined to six areas for the 1939-1940 period. Thereafter, the entire program will be extended as rapidly as conditions merit.

In each of the six specified areas, the Bank Board's field men are now concentrating in selected primary localities. As circumstances warrant and as time permits secondary points will be developed.

Local Plan operations which have progressed to

varying degrees in localities outside of the six areas have been and will continue to be served by mail and in such other ways as facilities of the Bank Board permit.

For specific information as to present points of operation within the six areas, communications should be addressed to the Federal Home Building Service Section, Federal Home Loan Bank Board, 1st and Indiana Ave., N. W., Washington, D. C. As the activities of the program increase, information will be forthcoming as to the general progress of the Plan.

THE AMERICAN INSTITUTE OF ARCHITECTS
1741 New York Avenue, N. W.
Washington, D. C.

EDWIN BERGSTROM
President

C. T. INGHAM
Secretary

THE PRODUCERS' COUNCIL, INC.
122 East 42nd Street
New York, N. Y.

ALBERT B. TIBBETS
President

J. W. FOLLIN
Managing Director



THE ANSWERS TO THESE QUESTIONS CAN POINT THE WAY TO INCREASED BUILDER'S PROFITS THIS YEAR . . . or any other year!

★ ★ ★

¶ . . . which income classifications among American families offer
the best market for new homes in largest quantities ?

★ ★ ★

¶ . . . what is the amount of money which families in this group
are in the habit of paying for their housing accommodations ?

★ ★ ★

¶ . . . what kind and what cost house can be made to fit the
budget of building's most numerous type of prospect ?

★ ★ ★

¶ . . . what are ways and means of reaching a market which still
thinks of home ownership in terms of old high-interest payments ?

★ ★ ★

. . NATIONAL SMALL HOMES DEMONSTRATION

. . . *A Non-Profit Cooperative Organization of
Building Material Manufacturers Can Help You
Answer Them . . .*

THIS INTRA-BUILDING INDUSTRY WAS ORGANIZED TO HELP YOU SELL THE LOW-COST HOME MARKET. TAKE ADVANTAGE OF THE HELP IT HAS FOR YOU.



FOR over three years 32 prominent national manufacturers of building materials have cooperated each year in technical studies seeking a general reduction in the cost of small homes. Representatives of these manufacturers have spent many hours in conference attempting to improve the efficiency of home building materials and the methods now employed to put them together.

The organized name of this activity is *National Small Homes Demonstration, Inc.* It is a voluntary, non-profit, non-dues-paying group, interested solely in making possible a greater proportion of home ownership among families in the \$1200 to \$2500 annual income group.

The *National Small Homes Demonstration* is an effort on the part of those engaged in the home building industry to educate themselves as to the housing requirements of the more than 20 million American families whose income dictates that housing for them shall not cost more than \$1.00 per day.

Nearly 50 original low-cost homes have been passed through the technical committee of *National Small Homes Demonstration* during the last three years. Fourteen of

these designs have been experimentally built and several thousand samples have been constructed as low-cost exhibit houses throughout the United States. The plans are intended to illustrate how, with care, you can secure in existing building industry *more house for your money.*

For 1940 the committee has prepared two well-engineered, basic floor plans, illustrative of the type of home which provides living accommodations at the lowest cubic foot cost. These two basic designs are illustrated on Page 7.

These homes, as well as all others planned in previous years by the *National Small Homes Demonstration*, are in the "low cost" class. All of them can be purchased on monthly payments amounting to less than \$1.00 per day and many of them will require only 50 cents to 75 cents per day for purchase over a 20-year period under the FHA insured mortgage system.

The offices of the *National Small Homes Demonstration* are at 1337 Connecticut Avenue, Washington, D. C. They are headquarters for home building information and every prospective home builder is welcome to seek help there.

THESE COOPERATORS CAN HELP YOU WITH THE LOW-COST BUILDING MARKET

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American Builder

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Architectural and Engineering Service
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The Kohler Company

J. J. MATSON
General Electric Company

ANGUS MACDONALD

Snead & Company

HERBERT U. NELSON, *Exec. Vice President*
National Assn. of Real Estate Boards

H. J. SCHWEIM, *General Manager*
Gypsum Association

A. F. H. SCOTT
Hoffman Specialty Company

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Trade Promotion Committee
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H. R. NORTHUP, *Secretary*
National Small Homes Demonstration

*... Six Million Families Rent Housing Accommodations
at an Average Cost of Less Than \$30.00 per Month
... The **BUILDING INDUSTRY CAN FURNISH
BETTER ACCOMMODATIONS AT LESS MONEY***

THERE are in the United States about 25 million non-relief families with an annual cash income per family ranging from \$250 to over a million. For how many of these families is there a legitimate opportunity for the building industry to turn regular housing expenditures into new construction?

Those families which pay less than \$15 per month are, on the average, unable to finance home ownership and must be left out of our calculations.

Families paying more than \$30 per month for housing are at present adequately supplied with houses. In general they occupy existing structures which cost more than \$5,000, and in their classification home ownership is already around the 70% figure.

There remain the large percentage of families who pay between \$15 and \$30 per month for some kind of housing. These families earn between \$1,000 and \$2,500 per year. They represent one-half, or 49.9%, of all non-relief families in the United States—or some 12 million families. Of this 12

million, approximately one-half already own accommodations. There remain six million rent-paying families, three million of which occupy rooms or apartments, and three million detached dwellings.

Using the 25 million non-relief families in the United States as a base, and reducing it by the various aforementioned factors, a possible potential small home market of approximately three million families may be visualized. The average income of these families is between \$1,000 and \$2,500 per year and they now rent a detached dwelling unit. Their rental of this type of accommodation is evidence of their preference for single-family living, and they are, each of them, potential home owners.

These people can afford houses ranging in cost from \$2,500 to \$6,000; and it is within this classification that monthly payment terms have been most greatly liberalized within the last year.

These people can and will buy homes if they are built within their means.

One-Half of All American Families . . .

MUST PAY LESS THAN ONE DOLLAR PER DAY!

Family Income Groups	Average Annual Income	% of Families each Group	Cumula- tive Percent	Annual Housing Expenditure	Monthly Housing Expenditure	Annual Savings Dollars	Housing Plus Savings	Monthly Money Available for Housing
\$1000-1250	\$1120	13.2	13.2	\$203	16.92		203	16.92
\$1250-1500	\$1364	10.8	24.0	\$230	19.17	14	244	20.33
\$1500-1750	\$1612	9.1	33.1	\$267	22.15	56	323	26.91
\$1750-2000	\$1829	7.3	40.4	\$302	25.17	92	394	32.83
\$2000-2500	\$2221	9.5	49.9	\$349	29.08	182	531	44.25

147 24

... GOVERNMENT REGULATED LOAN TERMS HAVE MADE SMALL HOMES EASIER TO BUY THAN RENT . . . *Opened New Markets for the Building Business*

ECONOMISTS say that building volume depends on three factors—the cost of construction . . . the quantity and terms on which building credit is available, and the national income.

Building costs generally are about 85% of the 1926 rate, which has been counted as normal by most authorities. National income is good, and going up. . . . More building credit is available than during any previous building boom period; and the cost of this credit is less and may be had under more liberal regulations than EVER before.

No family with a disposition to own a new home, a steady income (no matter how modest) and a good credit record, will be denied money by the many lending institutions which are vigorously seeking the investment of funds in owner-occupied residences.

This situation should mean a great deal to anyone whose livelihood comes either directly or indirectly from the building business.

Does the building industry realize the far-reaching effect of the credit situation upon its ability to do business? Abundant credit is only half the story. The interest rate and regulations under which this credit may be

used directly controls the number of building prospects in any given year.

The building industry has more prospects this year than in any other because the financial picture reclassifies for us a large block of existing renters into "prospective builders".

The continued liberalization of terms under which homes can be purchased, the extension of insured loan periods to 25 years plus reduction in initial payments, have tipped the delicate economic balance of *renting vs. buying* in favor of the latter.

For the first time in many years, *if ever*, it is now possible to buy a \$5,000 house with a down payment of \$500 and monthly payments of 98 cents per day. On the average the accommodations which the 98 cents per day will provide are superior to those which can be rented for \$1.25. Furthermore, at least 40 cents of the 98 cents is a recoverable expenditure in that it reduces the outstanding principal on the structure being purchased. *It is in effect a savings account.*

Changes in the character of the financial tools which the building industry must use to sell its product have occurred so gradually that we frequently overlook the tremendous difference between the cost of financing houses in 1940 and in 1925.

*. . . Plenty of the Lowest-Cost Financing in History
Is Available for this Mass Market . . .*

TAKE ADVANTAGE OF CURRENTLY FAVORABLE CIRCUMSTANCES TO SELL THIS NEW MARKET . . . *But Remember That the Rules Will Be Different*



THE technique of selling the low-priced market is new and different. As the houses are simplified so must the selling be simplified. There is no place in a merchandising program for low-price homes for all the devious steps ordinarily associated with individual new home construction.

Low priced homes are designed to appeal to a mass market and they must be sold on mass market merchandising principles, which means that they must be removed as far as possible from the category of custom-built structures.

Low-cost homes should be sold as an item of merchandise. They should be sold from a sample which demonstrates a given structure for a given amount of money on specific terms clearly stated.

Many people who have the means for the purchase of a new home today refrain from action because of their inability to find a simplified, clear-cut method of purchase. One of the most firmly established principles of salesmanship is the trite expression—"Strike while the iron is hot."

Houses can be sold if they can be seen and if the price and terms are definite enough to make rapid-fire business transaction possible.

Simplified methods based on unit prices known in advance will sell hundreds of thousands of small houses in America.

Advertise your price. . . . The first question anyone wants to know before purchasing anything is "How much does it cost?"

The inability of the building industry to quickly answer the "How much does it cost?" question has been responsible for more loss of business than the high cost of houses.

Show your price, advertise it, use it in the newspaper, advertise the down payment and the cost per month.

Among the important pieces of equipment which are part of the kit furnished lumber merchants and builders cooperating in the small house demonstration program are ready-prepared advertisements and newspaper mats.

Write your own ads around the mats furnished, but above all, advertise the price of your houses. Make it as easy to buy a new home as a new automobile.

THE construction of lower cost houses in larger numbers is a type of building business in which rules differ greatly from the general run of custom-built house construction. Builders whose business has been generally confined to structures in the higher cost brackets find it difficult to make established formulas fit the "low-cost" trade.

Successful low-cost building presupposes a larger number of low-cost units with a smaller profit margin per unit. The result is expected to produce more general volume and greater profits than a fewer number of larger homes Naturally a new set of rules must apply. Disappointment awaits the builder who attempts low-cost construction on the business pattern employed for larger units.

An enumeration of a few of the characteristics of this class of trade may help:

1. Low-cost building must be confined to a very few plans—not the wide choice ordinarily associated with higher priced houses.
2. Overhead must be greatly reduced, which means complete standardization in building equipment, building detail, financing methods and in the selling program.
3. Reduction of costs in the physical structure only is not enough to produce low-cost houses. Cost reductions must extend to land, financing, and sales.
4. Mechanical equipment within the house must be reduced to a minimum. Material and labor savings gained through efficiency in plan must be matched in cost savings in the plumbing, heating and electrical departments.
5. Interior decoration costs must be reduced. A small house will not stand the same proportional cost for interior finish as a custom-built structure.
6. Ground development following construction must be reduced to a minimum.
7. Selling should be done from a sample house Such sample house should be forced to produce the sale of more than the sample house itself. Each unit in a small house program cannot possibly support the advertising and promotional cost attached to larger houses. (Many successful low-cost builders have sales budgets which do not exceed \$50 for \$3,000 homes.)
8. Construction should be carried on in groups of not less than three houses.
9. Land costs should not exceed 10 to 15 per cent of the cost of the structure.

Builders of low-cost houses must recognize the significant fact that a low-cost house is not a small house built on a large-house formula.

... JUST WHAT DOES THE TERM ... "LOW-COST HOUSING" MEAN ?



Low Costs Are Relative

A structure which represents low cost in one community may be above or below a true low cost for other geographical areas. It means adequate accommodations in the form of a small house low in cost when weighed in proportion to the average cost of housing in a given community. This is influenced by local prices and wage rates. Climate also has an influence due to type and capacity and hence the cost of heating facilities which may be required. Land costs, fixed fee charges for utilities and public improvements also vary considerably. In fact an index published by the Federal Home Loan Bank Board shows that a standard house may cost as much as 45% more in one city than in another.

What Is Low-Cost Housing?

Low-cost housing has been discussed in such a variety of terms and under so many different conceptions during the past decade that it seems wise to define for the purposes of this program the sense in which "low-cost" is intended.

Low-cost housing does not imply cheap, shoddy, unsafe or impractical construction. Low-cost construction need be no less durable nor less satisfactory over a long period of time than any other kind of construction.

In essence, low-cost construction means efficient construction, elimination of nonessentials and the reduction of a residential design to a point where it represents an adequate amount of cubic-space effectively enclosed for the least amount of money. This does not imply undue reduction in the size of essential rooms, nor the elimination of equipment necessary for comfortable modern living. It does mean reduction in amount of ornamentation, special detail and construction undertaken strictly for appearance reasons.

A modern, low-cost house can be comfortable, conveniently arranged and well equipped, good looking, of good architectural design and in good taste. A modern, low-cost house does not presuppose the use of unsuitable or inadequate material nor incompetent labor used in assembling the material. It does mean the elimination of whimsical requirements in favor of practical ones.

The objective reflected by the National Small Homes Demonstration 1940 Houses is to achieve efficient, comfortable houses without frills or waste which will enable local builders to provide housing for low-income families in their communities consistent with the ability of people to pay for them.

Factors Important in Lowering Building Costs

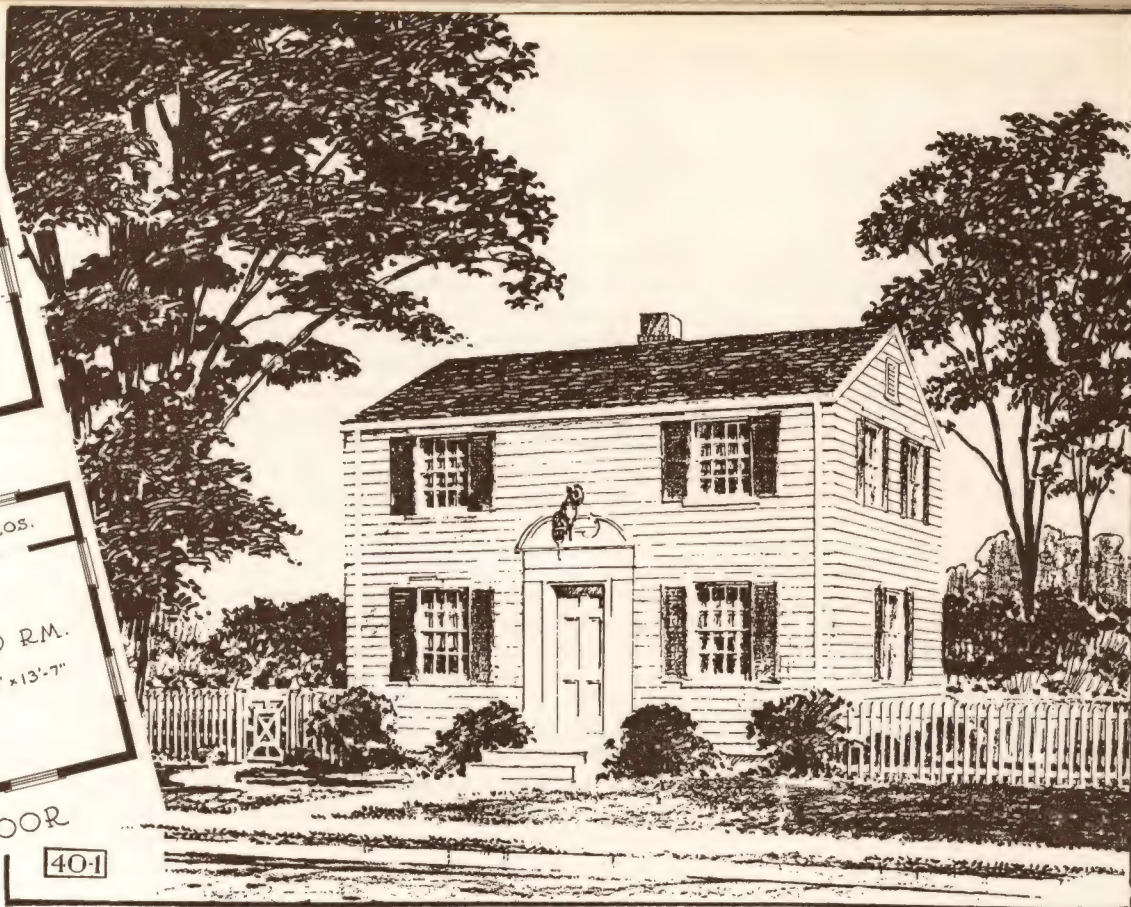
Some elements which make up the final cost of a home are not within the immediate control of the builder or home owner. These include a number of fixed charges which vary to some extent in different communities, such as public utilities and improvements, fees for permits, street opening for sewers and water, title and recording costs, labor rates, financing fees, land cost and taxes. Hence there is left, the efficiency of the plan and the speed and economy of construction as the two principal factors on which the ingenuity of the owner and builder will have the effect of either reducing or increasing costs. These factors may apply to only 25 to 50% of the total cost of the home.

Full Data on These "ENGINEERED" Designs Available

Working drawings for these two typical low-cost houses are available from the headquarters office of the National Small Homes Demonstration, Inc., 1337 Connecticut Avenue, Washington, D. C. The material includes:

1. Complete plans and framing details designed in the new plank and beam construction and also adequate information on traditional joisted construction.
2. Outline specification blanks as a convenient facility for recording the materials to be used for the individual house to fit local preference.
3. Material lists which also provide cutting schedules to enable the carpenter, yard or mill to pre-cut each piece of framing without laying a ruler or scale on the drawings.
4. Summarized estimate sheet which the dealer or builder can use in making up his bid for the prospective home purchaser.

For purposes of information and demonstration this material for each of the basic designs is priced at \$1.00 per set.



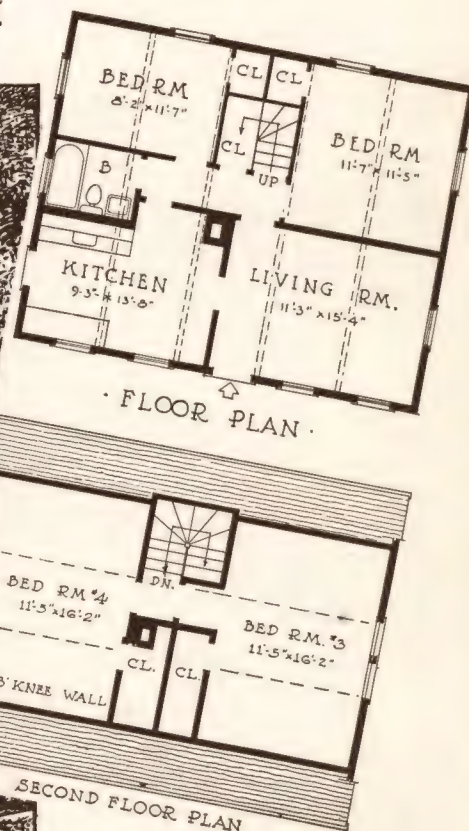
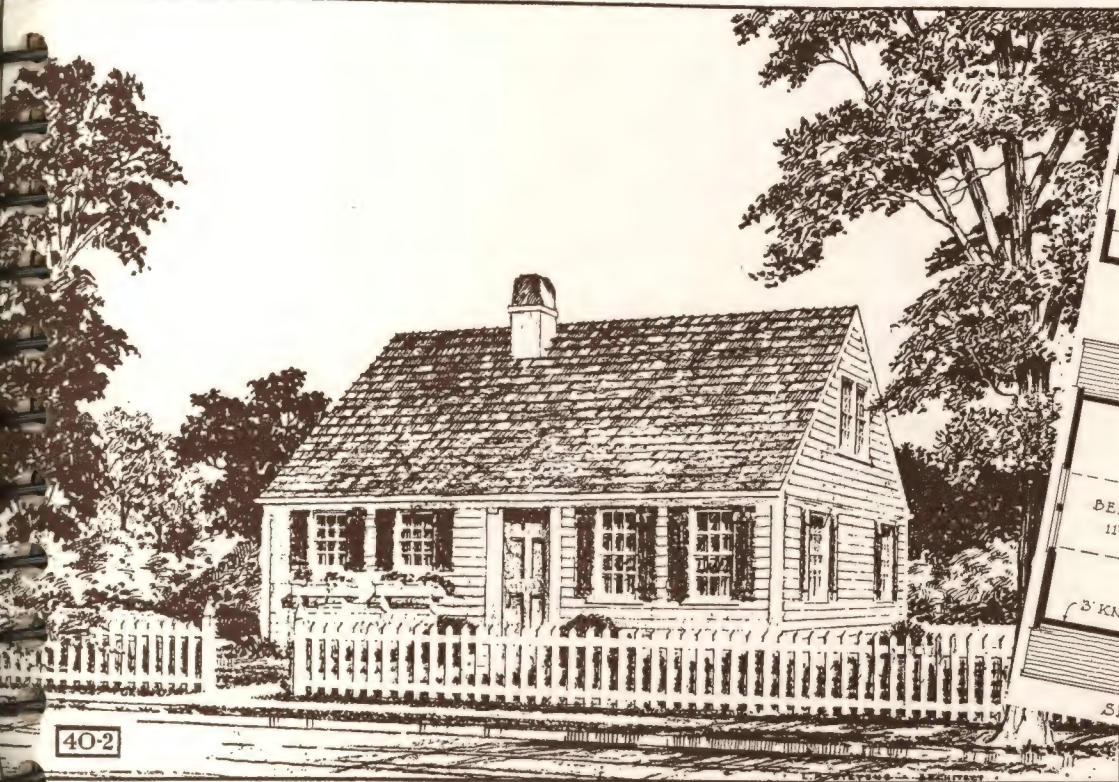
Two Ideal 1940 Lumber-Built Demonstration Designs

THE two basic small homes illustrated on these pages are the latest additions to a series of low-cost small home designs developed by the National Small Homes Demonstration, Inc., over a period of the past three years.

The designs are termed "engineered," because they have been carefully studied and analyzed by a competent group of technical experts with a broad background of experience in building construction.

They are "engineered" in the sense that the designs combine simplicity, efficiency, and attractiveness with the utilization of new, more economic, methods of frame construction which enable the dealer-builder to combine speed of construction with greater strength and lower cost.

TWO DESIGNS TYPICAL of MODERN "Low-Cost"



SALES HELPS AVAILABLE TO YOU - - - At Cost

PLANS



Quarter-scale working drawings of two thoroughly engineered small homes, specifically designed to typify the size and accommodations required by the average family in the \$1200 to \$2500 income class, are available through our office.

One of the houses is a five-room, two-story structure convertible into a six-room house by the addition of a "bunk" room, and the other a four-room, one-story house which may be converted into a six-room, story-and-a-half design. The houses and the plans have been carefully studied and restudied to make them represent the kind of dwelling which produces most house for your money. Both the houses, along with 12 variations and additions to each, are thoroughly described and illustrated in the new 1940 Manuals of National Small Homes Demonstration. As always, the price of plans is \$1.00 per set for the first set, and 75¢ for additional sets.

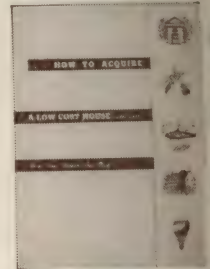


BOOKLETS



You are not always in a position to tell the low-cost home story to those who should hear it. . . . It won't be necessary this year, because there is available for you a new, modern, silent-salesman booklet which can be a powerful bulwark for a local sales campaign. The new booklet, designed to bring the advantageous home building situation this year to the attention of the renters in your town, is called **HOW TO ACQUIRE A NEW HOME AT LESS THAN \$1.00 A DAY**. A companion booklet—**HOW TO MAKE MORE MONEY AND DO MORE BUSINESS WITH LOWER COST SMALL HOMES**—is designed to give you and your builders helpful information on this market and how to reach it.

Both booklets are available at no charge for single copies to lumbermen and builders.

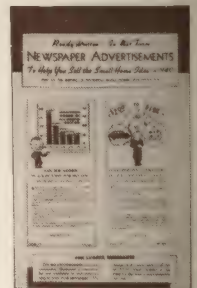


ADVS



Your local newspaper is probably the best means of broadcasting to all the people of your community the favorable circumstances which offer the prospective home builder a "break" in 1940.

To save your time and help you circulate a message which is bound to result in more business, we have prepared for you a series of 10 new ready-written newspaper advertisements which dramatically present 1940 as the right time to build a new home. You have nothing to write and no pictures to secure. Just take the mats to your local paper and have your name and address added at the bottom. All 10 mats cost you only \$3.50.



STORIES



Homes and home building are news. Everybody is interested. The newspaper editors are often glad and anxious to use as editorial material information which is new and helpful to their readers.

We will help you offer your local editors an opportunity to print such material. We will gladly supply specially written material for you on 1940 as a home building year, and on the ways and means of securing a low-cost home under today's unusually liberal low-cost financing methods.

Write us your specific requirements. There is no charge of any kind for this service.



MODELS



Carefully prepared one-half-inch scale models are available for the two 1940 typical small homes. Our office has made arrangements for the quantity production of these first-class, all-wood models, and offers dealers or builders wishing to take advantage of the sales possibility in models the quantity price for single model purchases.

Half the roof of each model is detachable and the floor plan of the house is carefully and neatly illustrated by partitions for all rooms.

Models are mounted on a platform approximately 24 x 24. The cost to us for each model is from \$35 to \$45, f.o.b. Chicago. The charge to you will be the same. Three-eighths-inch scale models in cardboard are also available at \$6.25 each.



HANDY TABLE SHOWING "PRICE PER PIECE" OF DIFFERENT STANDARD-SIZED LUMBER

These tables break down the price of lumber per thousand feet into the "Price per Piece". Where prices are higher than those quoted simply combine two prices:—for instance—if a 6 x 6 — 8 feet long was priced at \$105.00 per M—simply take the \$50 and \$55 per piece prices and add them up together. The per piece price in this instance would be \$2.52.

1 x 2								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	6	6	7	8	8	9	10	10
10	7	8	9	9	10	11	12	13
12	8	9	10	11	12	13	14	15
14	10	11	12	13	14	15	17	18
16	11	12	14	15	16	18	19	20
18	12	14	15	17	18	20	21	23
Lin. Ft.	2/3	3/4	1	1	1	1	1 1/4	1 1/4

1 x 5								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	14	15	17	19	20	22	24	25
10	17	19	21	23	25	27	29	31
12	20	23	25	28	30	33	35	38
14	24	26	29	32	35	38	41	44
16	27	30	34	37	40	44	47	50
18	30	34	38	41	45	49	53	56
Lin. Ft.	1 2/3	2	2	2 1/3	2 1/2	2 3/4	3	3 1/4

1 x 3								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	8	9	10	11	12	13	14	15
10	10	11	13	14	15	16	18	19
12	12	14	15	17	18	20	21	23
14	14	16	18	19	21	23	25	26
16	16	18	20	22	24	26	28	30
18	18	20	23	25	27	29	32	34
Lin. Ft.	1	1 1/4	1 1/4	1 1/2	1 1/2	1 2/3	1 3/4	2

1 x 6 — 2 x 3								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	16	18	20	22	24	26	28	30
10	20	23	25	28	30	33	35	38
12	24	27	30	33	36	39	42	45
14	28	32	35	39	42	46	49	53
16	32	36	40	44	48	52	56	60
18	36	41	45	50	54	59	63	68
Lin. Ft.	2	2 1/4	2 1/2	2 3/4	3	3 1/4	3 1/2	3 3/4

1 x 4 — 2 x 2								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	11	12	14	15	16	18	19	20
10	14	15	17	19	20	22	24	25
12	16	18	20	22	24	26	28	30
14	19	21	24	26	28	31	33	35
16	22	24	27	30	32	35	38	40
18	24	27	30	33	36	39	42	45
Lin. Ft.	1 1/3	1 1/2	1 2/3	2	2	2	2 1/3	2 1/2

1 x 8 — 2 x 4								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	22	24	27	30	32	35	38	40
10	27	30	34	37	40	44	47	50
12	32	36	40	44	48	52	56	60
14	38	42	47	52	56	61	66	70
16	43	48	54	59	64	70	75	80
18	48	54	60	66	72	78	84	90
Lin. Ft.	2 2/3	3	3 1/3	3 2/3	4	4 1/3	4 2/3	5

HANDY TABLE SHOWING "PRICE PER PIECE"

1 x 10 — 2 x 5								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	27	30	34	37	40	44	47	50
10	34	38	42	46	50	54	59	63
12	40	45	50	55	60	65	70	75
14	47	53	59	64	70	76	82	88
16	54	60	67	74	80	87	94	100
18	60	68	75	83	90	98	105	113
Lin. Ft.	3 $\frac{1}{3}$	3 $\frac{3}{4}$	4	4 $\frac{1}{2}$	5	5 $\frac{1}{2}$	6	6 $\frac{1}{4}$

2 x 12 — 3 x 8 — 4 x 6								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	64	72	80	88	96	104	112	120
10	80	90	100	110	120	130	140	150
12	96	108	120	132	144	156	168	180
14	112	126	140	154	168	182	196	210
16	128	144	160	176	192	208	224	240
18	144	162	180	198	216	234	252	270
Lin. Ft.	8	9	10	11	12	13	14	15

1 x 12 — 2 x 6 — 3 x 4								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	32	36	40	44	48	52	56	60
10	40	45	50	55	60	65	70	75
12	48	54	60	66	72	78	84	90
14	56	63	70	77	84	91	98	105
16	64	72	80	88	96	104	112	120
18	72	81	90	99	108	117	126	135
Lin. Ft.	4	4 $\frac{1}{2}$	5	5 $\frac{1}{2}$	6	6 $\frac{1}{2}$	7	7 $\frac{1}{2}$

1 x 14								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	38	42	47	52	56	61	66	70
10	47	53	59	64	70	76	82	88
12	56	63	70	77	84	91	98	105
14	66	74	82	90	98	106	115	123
16	75	84	94	103	112	122	131	140
18	84	95	105	116	126	137	147	158
Lin. Ft.	4 $\frac{2}{3}$	5 $\frac{1}{4}$	6	6 $\frac{1}{2}$	7	7 $\frac{2}{3}$	8 $\frac{1}{4}$	8 $\frac{3}{4}$

2 x 8 — 4 x 4 — 1 x 16								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	43	48	54	59	64	70	75	80
10	54	60	67	74	80	87	94	100
12	64	72	80	88	96	104	112	120
14	75	84	94	103	112	122	131	140
16	86	96	107	118	128	139	150	160
18	96	108	120	132	144	156	168	180
Lin. Ft.	5 $\frac{1}{3}$	6	6 $\frac{2}{3}$	7 $\frac{1}{3}$	8	8 $\frac{2}{3}$	9 $\frac{1}{3}$	10

5/4 x 2								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	7	8	9	9	10	11	12	13
10	9	10	11	12	13	14	15	16
12	10	11	13	14	15	17	18	19
14	12	13	15	16	18	19	21	22
16	14	15	17	19	20	22	24	25
18	15	17	19	21	23	25	27	28
Lin. Ft.	1	1	1	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$

2 x 10 — 1 x 20 — 4 x 5 — 5/4 x 16								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	54	60	67	74	80	87	94	100
10	67	75	84	92	100	109	117	125
12	80	90	100	110	120	130	140	150
14	94	105	117	129	140	152	164	175
16	107	120	134	147	160	174	187	200
18	120	135	150	165	180	195	210	225
Lin. Ft.	6 $\frac{2}{3}$	7 $\frac{1}{2}$	8 $\frac{1}{3}$	9	10	11	11 $\frac{2}{3}$	12 $\frac{1}{2}$

5/4 x 3								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	10	11	13	14	15	16	18	19
10	13	14	16	17	19	21	22	24
12	15	17	19	21	23	25	26	28
14	18	20	22	24	26	29	31	33
16	20	23	25	28	30	33	35	38
18	23	26	28	31	34	37	40	42
Lin. Ft.	1 $\frac{1}{4}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{3}{4}$	2	2	2 $\frac{1}{4}$	2 $\frac{1}{3}$

Additional copies of this table on cardboard may be had FREE by

OF DIFFERENT STANDARD-SIZED LUMBER

5/4 x 4								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	14	15	17	19	20	22	24	25
10	17	19	21	23	25	27	29	31
12	20	23	25	28	30	33	35	38
14	24	26	29	32	35	38	41	44
16	27	30	34	37	40	44	47	50
18	30	34	38	41	45	49	53	56
Lin. Ft.	1 $\frac{2}{3}$	2	2	2 $\frac{1}{3}$	2 $\frac{1}{2}$	2 $\frac{3}{4}$	3	3 $\frac{1}{4}$

5/4 x 10								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	34	38	42	46	50	54	59	63
10	42	47	52	58	63	68	73	78
12	50	56	63	69	75	81	88	94
14	59	66	73	80	88	95	102	110
16	67	75	84	92	100	109	117	125
18	75	85	94	103	113	122	131	141
Lin. Ft.	4 $\frac{1}{4}$	4 $\frac{2}{3}$	5 $\frac{1}{4}$	5 $\frac{3}{4}$	6 $\frac{1}{4}$	6 $\frac{3}{4}$	7 $\frac{1}{3}$	8

5/4 x 5								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	17	19	21	23	25	27	29	31
10	21	24	26	29	31	34	37	39
12	25	28	31	35	38	41	44	47
14	29	33	37	40	44	48	51	55
16	34	38	42	46	50	54	59	63
18	38	42	47	52	56	61	66	71
Lin. Ft.	2	2 $\frac{1}{3}$	2 $\frac{2}{3}$	3	3 $\frac{1}{4}$	3 $\frac{1}{2}$	3 $\frac{2}{3}$	4

5/4 x 12								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	40	45	50	55	60	65	70	75
10	50	56	63	69	75	81	88	94
12	60	68	75	83	90	98	105	113
14	70	79	88	96	105	114	123	131
16	80	90	100	110	120	130	140	150
18	90	101	113	124	135	146	158	169
Lin. Ft.	5	5 $\frac{2}{3}$	6 $\frac{1}{4}$	7	7 $\frac{1}{2}$	8 $\frac{1}{4}$	8 $\frac{3}{4}$	9 $\frac{1}{2}$

5/4 x 6								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	20	23	25	28	30	33	35	38
10	25	28	31	35	38	41	44	47
12	30	34	38	41	45	49	53	56
14	35	40	44	48	53	57	61	66
16	40	45	50	55	60	65	70	75
18	45	51	56	62	68	73	79	85
Lin. Ft.	2 $\frac{1}{2}$	3	3 $\frac{1}{4}$	3 $\frac{1}{2}$	3 $\frac{3}{4}$	4	4 $\frac{1}{2}$	4 $\frac{2}{3}$

5/4 x 14								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	47	53	59	64	70	76	82	88
10	59	66	73	80	88	95	102	110
12	70	79	88	96	105	114	123	132
14	82	92	102	113	123	133	143	153
16	94	105	117	129	140	152	164	175
18	105	118	131	145	158	171	184	197
Lin. Ft.	6	6 $\frac{1}{2}$	7 $\frac{1}{3}$	8	8 $\frac{3}{4}$	9 $\frac{1}{2}$	10 $\frac{1}{4}$	11

5/4 x 8								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	27	30	34	37	40	44	47	50
10	34	38	42	46	50	54	59	63
12	40	45	50	55	60	65	70	75
14	47	53	59	64	70	76	82	88
16	54	60	67	74	80	87	94	100
18	60	68	75	83	90	98	105	113
Lin. Ft.	3 $\frac{1}{3}$	3 $\frac{3}{4}$	4 $\frac{1}{4}$	4 $\frac{1}{2}$	5	5 $\frac{1}{2}$	6	6 $\frac{1}{4}$

5/4 x 18								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	60	68	75	83	90	98	105	113
10	75	85	94	103	113	122	131	141
12	90	101	113	124	135	146	158	169
14	105	118	131	145	158	171	184	197
16	120	135	150	165	180	195	210	225
18	135	152	169	186	203	220	236	253
Lin. Ft.	7 $\frac{1}{2}$	8 $\frac{1}{2}$	9 $\frac{1}{2}$	10 $\frac{1}{3}$	11 $\frac{1}{4}$	12 $\frac{1}{4}$	13 $\frac{1}{4}$	14

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HANDY TABLE SHOWING "PRICE PER PIECE" OF DIFFERENT STANDARD-SIZED LUMBER

3 x 6 — 1 x 18 — 2 x 9								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	48	54	60	66	72	78	84	90
10	60	68	75	83	90	98	105	113
12	72	81	90	99	108	117	126	135
14	84	95	105	116	126	137	147	158
16	96	108	120	132	144	156	168	180
18	108	122	135	149	162	176	189	203
Lin. Ft.	6	6 ³ / ₄	7 ¹ / ₂	8 ¹ / ₄	9	9 ³ / ₄	10 ¹ / ₂	11 ¹ / ₄

6 x 6 — 3 x 12								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	96	108	120	132	144	156	168	180
10	120	135	150	165	180	195	210	225
12	144	162	180	198	216	234	252	270
14	168	189	210	231	252	273	294	315
16	192	216	240	264	288	312	336	360
18	216	243	270	297	324	351	378	405
Lin. Ft.	12	13 ¹ / ₂	15	16 ¹ / ₂	18	19 ¹ / ₂	21	22 ¹ / ₂

3 x 10								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	80	90	100	110	120	130	140	150
10	100	113	125	138	150	163	175	188
12	120	135	150	165	180	195	210	225
14	140	158	175	193	210	228	245	263
16	160	180	200	220	240	260	280	300
18	180	203	225	248	270	293	315	338
Lin. Ft.	10	11 ¹ / ₄	12 ¹ / ₂	13 ³ / ₄	15	16 ¹ / ₄	17 ¹ / ₂	18 ³ / ₄

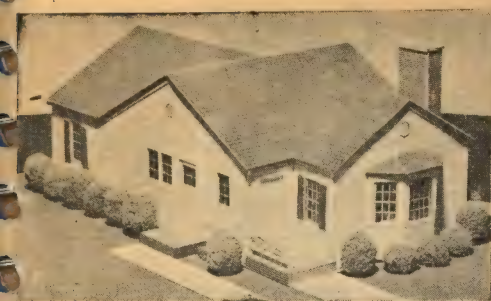
6 x 8								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	128	144	160	176	192	208	224	240
10	160	180	200	220	240	260	280	300
12	192	216	240	264	288	312	336	360
14	224	252	280	308	336	364	392	420
16	256	288	320	352	384	416	448	480
18	288	324	360	396	432	468	504	540
Lin. Ft.	16	18	20	22	24	26	28	30

8 x 8								
Length	\$40	\$45	\$50	\$55	\$60	\$65	\$70	\$75
8	171	192	214	235	256	278	299	320
10	214	240	268	294	320	347	374	400
12	256	288	320	352	384	416	448	480
14	299	336	374	411	448	486	523	560
16	342	384	427	470	512	555	598	640
18	384	432	480	528	576	624	672	720
Lin. Ft.	21 ¹ / ₃	24	26 ² / ₃	29 ¹ / ₃	32	34 ² / ₃	37 ¹ / ₃	40

Additional copies of this table, printed on cardboard and suitable for easy reference in figuring "Price per Piece" may be had without any obligation on your part by

WRITING TO

CHICAGO PAINTS, INC. 4500 W. Fourteenth St., Chicago, Ill.



One of Six Special Models Made of
Johns-Manville Gildway Homes



Special Tru-Style Model for Richardson
Lumber Company, Clarinda, Iowa

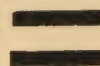


Special Tru-Style Model for Tri-State
Lumber Company, Salt Lake City, Utah

TruStyle
HOME MODELS



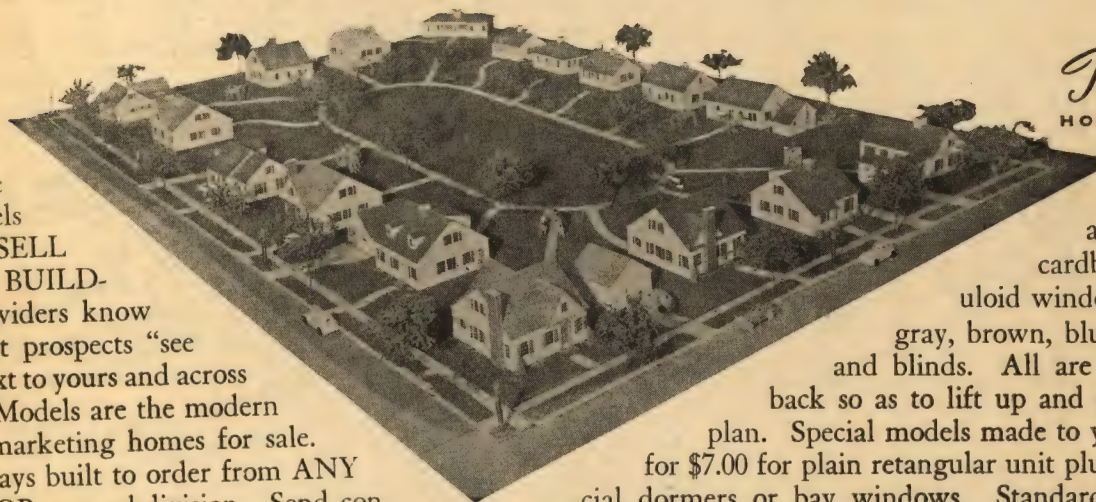
HOLT'S
KwikKost
ESTIMATING SYSTEMS



MORE and BETTER
SALES of HOMES.

THOUSANDS of lumber dealers and their contractor friends from coast to coast and lakes to gulf have proved that Holt's Systems save MUCH time and make MANY MORE Sales. With TruStyle Home Models to attract attention and create desire, Holt's KwikKost Estimating System CLOSES by giving the ACCURATE price of ANY house built of ANY material at ANY price or ANY wage scale ANYWHERE and EVERYWHERE.

HOLT'S KwikKost is STREAMLINED for Quick Sales.



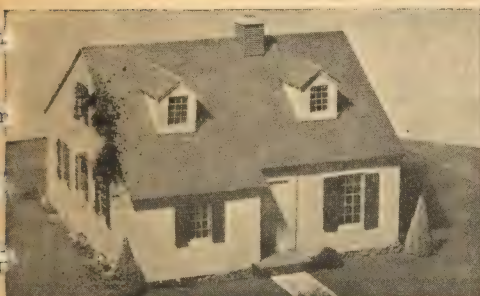
Such Special Displays of TruStyle Home Models will help to SELL BEFORE BUILDING. Subdividers know it pays to let prospects "see the house next to yours and across the street." Models are the modern method of marketing homes for sale. Special displays built to order from ANY plans and FOR any subdivision. Send contour plans and pictures of proposed homes for prices.

TruStyle
HOME MODELS

such as these, are made of cardboard with celluloid windows and green, gray, brown, blue or red roofs and blinds. All are hinged at the back so as to lift up and show the floor plan. Special models made to your own plans for \$7.00 for plain rectangular unit plus \$1.00 for special dormers or bay windows. Standard dormers and bays 50c each. Send plans and state color of roof and blinds.

SPECIAL INTRODUCTORY OFFER

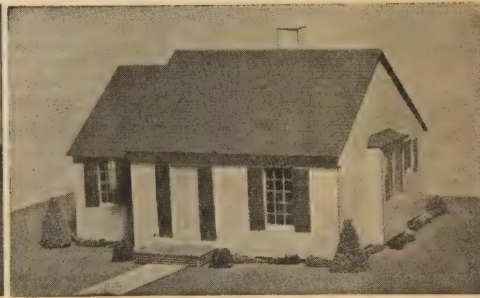
Any of the models shown below only \$3.00 each plus express. All three for \$8.50, express prepaid.



No. 102—8" Siding
N. W. Lumbermen's Association Plan



No. 121—8" Siding With Overhanging
Gable



No. 131—Shingled Walls
National Plan Service Plan

HOLT PUBLISHING CO.

Lumber Exchange

MINNEAPOLIS, MINN.

How Much Will This House Cost?

How much will this No. 1 World's Fair DUDAL DUTY Home cost in YOUR locality?

For that matter, how much will ANY house cost to build at YOUR prices for YOUR materials at the wage scale prevailing where YOU are supposed to be the best authority on building costs?

This specimen KwicKost Estimate will explain the quickest and easiest ACCURATE method of estimating ANY house ANYWHERE and, also, serve as the "Key" to the "KwicKost KEYS" given on the opposite page for the home designs shown in this valuable data book.

To explain, the first filled-in item given the code letter, A, as shown in the "Units" column, means that excavating the 192

HOLT'S
KwicKOST
ESTIMATING SYSTEMS

FOR *National Home Builders Bureau* ADDRESS *Kenig*
PLAN NO. *1 World's Fair House* SIZE *37x44* COR- *C&F* NICE

STANDARD SPECIFICATIONS EXCEPT AS LISTED

Note: All Unit prices shown are illustrative only but your own local costs can be gotten from the KwicKost book per sample pages at right.

	UNITS	PRICE	AMOUNT	USE
EXCAVATION & CLEARING LOT	192 A	204	38 40	
FOUNDATION & DRAIN TILE	0 B1			
TRENCH	192 B2	904	172 80	
WALLS	0 C			
BASEMENT FLOOR	200 D	164	32 00	
GARAGE FLOOR	14.6 E	285	416 10	
OS WALLS	9.6 F	464	387 8	
FIRST FLOOR	0 G1			
SECOND FLOOR WITH FIN. FLG.	0 G2			
SECOND FLOOR WITHOUT FIN. FLG.	0 H			
CEILING	11.6 I	1880	218	
ATTIC FLOOR WITH STAIRS	0 J			
ROOF	140 K	210	29	
HIPS AND VALLEYS	126 L	604		
CORNICE C. & F.	176 M	194		
PART N	160 N	205		
IS FINISH OS WALLS	162 O	90		
FRONT DOORS	1 P	463		
REAR AND GRADE DOORS	2 Q	327		
GARAGE DOORS & HARDWARE	1 R			
IS DOORS & CASED OPGS.	17 S	17		
WINDOWS	10 T			
CASEMENT OR SPECIAL SASH	2 U			
GABLE SASH & LOUVRES	0 V			
CHIMNEY	18 W	261		
BUILT IN CABINETS AS LISTED ON OTHER SIDE	0 X	286		
MAIN STAIRS	0 Y			
NEWELS & RAIL	0 Z1			
PORCH	0 Z2			
FLOOR	0 Z3			
CEILING	0 Z4			
PORCH BEAM	0 Z5			
PORCH POST & COLUMNS	0 Z6			
PORCH RAIL WITH SASH & SCREENS	0 Z7			
BALCONY RAIL & NEWELS	0 Z8			
BASEMENT PART N WITH DOORS	0 Z9			
TILE FOR VEST & BATH	0 Z10			
ELECTRIC WIRING	14600	7500		
PLUMBING				
HEATING & AIR CONDITIONING				
TERRACES PCH. STEPS				
SIDEWALKS & DRIVEWAY				
GARAGE, IF SEPARATE				
GUTTERS				
PERMIT, INS. BOND, ETC.				
TOTAL PRICE			\$ 5430 84	

FRAME WALL COST DATA
See Details Other Side

Code	Materials and Labor Per Square of Wall	Bd. Ft.	Hours
1	2x4 Studs 16" o.c. 2x10 and 2x6 box sill	107	3.5
2	Same as 1 without 2x6 mud sill	97	3.3
3	Same as 1 except 2x8 box sill	104	3.5
4	Same as 3 without 2x6 mud sill	94	3.3
10	Sheathing (5% & opgs. for waste)	105	2.0
11	Boards if full width	113	2.4
12	1x10 of 9 1/4" face	116	2.5
13	1x8 of 7 1/4" face	121	2.6
14	1x6 of 5 1/4" face	130	2.7
20	Paper 110 sq. ft. per layer		
30	Wall Finish (10% deducted for opgs.)		
31	4" Bevel siding exposed 2 1/4"	131	5.0
32	8" Bevel siding exposed 4 1/4"	120	4.6
33	10" Bevel siding exposed 6 1/4"	111	4.4
34	1x4 Rustic siding exposed 8 1/4"	103	4.3
35	1x6 Rustic siding of 3 1/4" face	111	4.5
36	Shingles exposed 5" (squares)	90	4.1
37	Stucco, 11.1 sq. ft. per sq. ft. of wall		3.9
38	Brick veneer, ar. sq. ft. per sq. ft. of wall		
39	Nails figure 10		
	Paint. Consult		

PRICE PER SQUARE OUTSIDE WALLS

CODE	MATERIAL	BD. FT.	PRICE	AMOUNT
1	#1 Fin	107	50	535
13	#2 R & M	121	40	484
20	Dumbrand-Tells	223	30	666
31	12x6 #1 R.C.	120	55	660
	PAINTING	10	54	540
	LABOR	19	49	941
	MATERIAL PER SQUARE			
	CONTRACTOR'S O&P			
	MATERIAL AND LABOR PER SQUARE			

ALTERNATE SPECIFICATIONS

CODE	MATERIAL	BD. FT.	PRICE	AMOUNT	+ OR -
3	#2 R & M	104	45	468	-67
12	8" #3 Sd	116	36	418	-66
32	3/4x8 #1 R.C.	111	90	999	+339
33	3/4x10 " "	103	96	989	+329
36	2x8 " "	400			
	10" R & M #1 R.C.	550			
	Paint = Stain	4.30			-2.30
	Asbestos Sgls	10			-3.84
	Paint	10			-1.54
					+86

This page gives data to fill in this one

This space is to include labor with the price per square if desired.

3/4 ACTUAL SIZE

KwickKost Keys for Home Designs in Small Homes Data Book.

linear feet of trench walls will cost \$8.50 at 20 cents per linear foot. If your price is 25 cents, the cost would be extended as \$48.00, or 192 times 25 cents. Likewise, the 192 linear feet of trench walls (code B2) at 90 cents would be \$172.80 for this item of cost. And the 14.6 squares (100 sq. ft.) of Outside Walls, which is the wall surface of this house EVERYWHERE, is extended as \$416.10 at the Unit Cost of \$28.50 per square. If material only is figured and walls cost \$19.49 per square, as shown by the sample page from the KwickKost book the material for the walls would be figured as 14.6 times \$19.49 or \$284.55. In other words—and this is the point that is emphasized:

The actual surface of walls, floors, roof and the other component units of each design illustrated positively AS the same EVERYWHERE AND, therefore, BASIC to builders and advisers to builders of homes EVERYWHERE.

Referring to Column No. 1 of table of KwickKost KEYS in conjunction with this specimen KwickKost estimate will make this all clear. Blank KwickKost forms are a great convenience in computing the cost of any of these designs and cost only \$1.00 per pad of 50. But anyone has permission to make his own forms using this as a guide.

KwickKost KEYS give all of the basic data for making a list of materials and the KwickKost Guide for Listing Materials is given to help prevent errors and omissions in listing the materials. This should be self-explanatory and is offered to help you sell, as well as to show a few more pages of the KwickKost book.

Space will not permit giving full explanation of these KwickKost KEYS but this can be had without cost by all who are interested as this KwickKost System will be sent in 10 days approval to ANYONE on request. Simply write on your own letterhead, "Send me KwickKost on 10 days approval per offer in Small Homes Data Book and we will either return it or remit the full price of \$7.00." That's fair, isn't it?

KwickKost deals in ACTUAL surfaces, the same as detailed lists, but it deals DIRECT with the dollar cost in converting prices from the buying-units of per piece and per thousand to the selling-units of so much for what is wanted. And it does so with time-proved SAFETY—not too high to lose a sale and not too low to lose money on sales made.

More than 20 years of actual use by practical, service-minded, lumber dealers, contractors and others, plus endorsement of Holt's Systems by leading trade journals and 29 lumbermen's associations should be convincing proof to EVERYONE EVERYWHERE. But

Holt has helped hundreds—he can help YOU—Write for Holt's KwickKost Estimating System on 10 days approval. SEND NO MONEY NOW. Either return it or remit the full price of \$7.00 AFTER you are convinced that it is your KEENEST selling-tool for CUTTING sales resistance. And don't forget to ask for catalogue of Tru-Style Home Models. Better write right now for BETTER LUCK in Selling.

Small Homes Data Book Home Design

CODE	No. 1	Pg. 18	Pg. 19	ELDON	EL'COTT	EL'TON	EUSTACE	EXCEL	OAKLEY	ONARGO	OTIS	CODE
A	*192	27	19	30	26	26	29	23	35	32	36	A
B1	0	100	85	104	100	112	106	89	116	108	118	B1
B2	192	0	0	104	110	10	92	47	20	50	0	B2
C	0	625	438	655	592	664	630	495	840	720	856	C
D	200	0	0	230	200	0	280	238	0	200	0	D
E	14.6	11.1	17.1	22.7	24.4	21.4	22.0	21.7	14.4	13.9	15.0	E
F	9.6	6.3	4.4	6.5	5.9	6.4	6.3	5.0	8.4	7.3	8.6	F
G1	0	0	4.4	6.5	6.0	6.8	5.2	6.4	0	0	0	G1
G2	0	0	0	0	0	0	8	9	0	0	0	G2
H	11.6	6.3	4.4	8.8	6.0	6.8	6.3	7.3	8.4	9.3	8.6	H
I	14.0	7.8	6.3	13.2	12.7	8.9	15.2	10.2	12.5	11.7	11.3	I
J	126	0	0	90	20	20	30	30	18	80	32	J
K	C-176	C-110	C-100	C-180	C-192	C-122	C-210	C-137	C-150	6'-164	C-134	K
L	160	78	93	160	156	164	6'-80	6'-62	0	0	0	L
M	162	100	170	252	198	220	141	149	128	108	133	M
N	1	1	1	2	2	1	23	213	116	151	118	N
O	2	1	2	2	2	1	3	1	1	1	1	O
P	1	0	0	1	1	0	1	1	1	1	1	P
Q	17	10	10	13	15	16	13	14	12	10	15	Q
R1	10	8	12	17	18	22	17	17	12	11	12	R1
R2	2	0	0	0	0	2	0	0	2	0	0	R2
S	0	2	2	0	4	0	0	2	2	0	2	S
T	0	0	0	1	1	1	33	34	31	27	29	T
U	16	25	34	35	35	35	1	1	5	0	0	U
V	0	0	0	1	1	1	1	1	5	1	0	V
W	.2	.2	0	1.3	1.6	.4	1.3	.2	.5	.1	0	W
X	.8	.2	0	1.3	1.4	.4	1.3	.1	.5	.1	0	X
Y	0	11	0	24	38	10	45	8	20	8	0	Y
	0	2	0	2	12	0	7	4	8	0	0	

Small Homes Data Book Home Design

CODE	SCPI-B	SCPI-2	No. 23	No. 24	No. 25	No. 26	No. 27	No. 28	No. 29	No. 30	No. 31	CODE
A	29	*112	36	38	36	38	33	48	42	*265	44	A
B1	105	0	127	124	124	136	112	139	129	0	139	B1
B2	0	112	56	46	12	20	48	112	8	265	80	B2
C	688	0	815	840	828	891	780	1156	1007	0	1043	C
D	0	0	200	0	0	0	0	312	0	200	247	D
E	11.6	11.8	20.1	14.6	15.2	13.7	14.2	22.8	14.7	21.9	23.3	E
F	6.9	7.5	8.2	8.4	8.3	8.9	8.3	11.6	10.1	13.2	10.4	F
G1	0	0	5.0	0	0	0	0	0	0	0	0	G1
G2	0	0	2.2	0	0	0	0	0	0	0	0	G2
H	6.9	7.5	10.2	8.4	8.3	8.9	8.3	11.6	10.1	15.2	10.4	H
I	9.2	9.7	15.0	12.6	11.2	11.5	12.6	21.1	14.2	20.9	19.4	I
J	0	0	14	30	26	76	0	32	10	0	70	J
K	C-66	C-148	C-230	C-166	C-154	3'-162	C-114	C-286	C-155	C-130	C-244	K
L	6'-62	0	0	0	0	0	24'-40	0	0	8'-106	0	L
M	95	112	186	128	123	123	133	142	150	150	140	M
N	105	112	214	124	124	136	122	139	129	184	139	N
O	1	1	1	2	1	1	1	2	1	2	2	O
P	0	0	1	0	0	0	0	1	0	1	1	P
Q	10	9	18	12	13	12	13	15	14	13	14	Q
R1	12	0	17	12	13	8	11	12	16	22	15	R1
R2	0	24	0	0	0	1	0	0	0	0	4	R2
S	2	0	2	3	3	0	2	2	2	4	31	S
T	26	17	31	28	30	27	28	30	29	26	0	T
U	0	0	1	0	0	0	0	0	0	0	0	U
V	.5	.9	0	1.4	.3	1.0	.8	1.6	.1	2.3	1.1	V
W	0	.9	0	1.4	0	1.0	.8	1.6	0	2.3	1.1	W
X	0	28	0	46	0	20	26	36	0	55	16	X
Y	0	2	0	13	0	7	4	8	0	20	0	Y

NOTE: Code "A" gives cubic yards excavating per foot of depth for FULL basement exclusive of porches and incorporated garages except items marked * which give linear feet of trench excavating. Code "K" for cornice gives width of plancher except "C" which means crown moulding and frieze only. Codes "H" and "M" include interior wall and ceiling finish for INCORPORATED garages, such as No. 23, but not if ATTACHED, like No. 28 and 31.

see for yourself—the sooner the better for You.

Sales are the life-blood of every business and KwickKost is the KEENEST TOOL for cutting resistance to buy because its SPEED-WITH-ACCURACY inspires the confidence that is the basis of all GOOD sales of homes EVERYWHERE of ANY materials, at ANY price, for ANY construction, at ANY wage scale and, what's more, WITH PROFIT that rewards those who are qualified to serve prospective home owners.

One may lose all of his material wealth but he still has that MENTAL RESERVE that cannot be lost and which will help him stage the "Come-back" ANYWHERE homes are built because "Holt System" men are in demand EVERYWHERE.

Sell Homes Safely with KwikKost---the Modern Way.

It's time enough to list the "sticks and bricks" for delivery AFTER the Sale. Then check with this list that A. W. Holt has been more than 20 years in compiling to prevent omissions. This list is included with his personal compliments.

MATERIAL LIST GUIDE

To avoid omissions, check your list with the following:

BASEMENT

1. Footings.....
2. Outside walls.....
3. Area ways.....
4. Masonry partitions.....
5. Basement floors.....
6. Form material.....
7. Waterproofing.....
8. Drain tile.....
9. Cinders.....
10. Chimney brick.....
11. Chimney top brick.....
12. Fireplace common brick.....
13. Face brick inside.....
14. Face brick outside.....
15. Fire brick and clay.....
16. Mortar for above.....
17. Mortar color.....
18. Flue lining.....
19. Hearth tile.....
20. Chimney caps.....
21. First floor girders.....
22. Girder post.....
23. Basement partition studs.....
24. Sheathing for above.....
25. Cellar sash and frames.....
26. Cellar storm and screens.....
27. Cellar stairs.....
28. Coal chute.....
29. Cleanout door and frame.....
30. Asphalt door and frame.....
31. Fireplace ash trap.....
32. Dome damper.....
33. Grate and andirons.....
34. Thimbles.....
35. Chimney flashing.....
36. Cellar sash sets.....
37. Basement door hardware.....
38. Blind girders.....

FLOOR FRAMING

39. Mud sills or foundation plates.....
40. Box sills.....
41. Beam fill boxing.....
42. First floor joist.....
43. Second floor joist.....

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44. Stair well trimmers and headers.....
45. Joist for doubling.....
46. Ceiling joist.....
47. Insulation.....

WALL FRAMING

48. Main wall studdings.....
49. Projection studdings.....
50. Sun room studdings.....
51. Dormer studdings.....
52. Porch balustrade studdings.....
53. Gable studdings.....
54. Shoe or floor plates for above.....
55. Single plates for above.....
56. Double plates for above.....
57. Extra studs for doubling.....
58. Diagonal wall brace.....
59. Headers over large openings.....
60. Trusses or struts for same.....
61. Ribbon or ledger boards.....
62. Firestopping.....

ROOF FRAMING

63. Main rafters.....
64. Dormer rafters.....
65. Porch rafters.....
66. Hip rafters.....
67. Valley rafters.....
68. Jack rafters.....
69. Balcony rafters.....
70. Deck frame and joist.....
71. Collar beams.....
72. Trusses and beams.....
73. Purlins.....

PARTITION FRAMING

74. First floor partition studs.....
75. Second floor partition studs.....
76. Attic partition studs.....
77. Shoe and plates for above.....
78. Firestops or bridging.....
79. Extra studdings to double.....
80. 2x6 studs for soil pipe.....
81. Shoe and plates for same.....
82. Headers for large openings.....
83. Trusses for same.....
84. Sliding door pocket studs.....
85. Covered ceiling brackets.....
86. Plaster arch brackets.....

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COVERINGS

87. Subfloor (regular or diagonal).....
88. Finish floor.....
89. Paper between floors.....
90. Reinforcing tile floors.....
91. Furring strips.....
92. Attic floor.....
93. Insulation or deadening felt.....
94. Lath or furring strips for same.....
95. Wall sheathing.....
96. Siding or substitute.....
97. Paper or insulation.....
98. Lath or keyboard for stucco.....
99. Metal lath for stucco.....
100. Stucco materials.....
101. Roof sheathing.....
102. Deck or balcony sheathing.....
103. Insulation.....
104. Roofing.....
105. Shingles.....
106. Deck or balcony roofing.....
107. Flashing.....
108. Valley tin.....
109. Hip shingles.....
110. Ridge roll.....
111. Coping.....

CORNICE

112. Plancher lookouts.....
113. Rafter ends.....
114. Main plancher (plancier).....
115. Dormer or porch plancher.....
116. Barge or verge boards.....
117. Frieze.....
118. Fascia.....
119. Gutter boxing.....
120. Crown moulding.....
121. Bed moulding.....
122. Shingle moulding.....
123. Band moulding.....
124. Dentil work.....
125. Gable brackets.....
126. Belt course.....
127. Base course.....
128. Water table for same.....
129. Moulding under above.....
130. Corner boards.....
131. Panel mouldings for same.....

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PORCHES

132. Sills and girders.....
133. Main joist.....
134. Cross joist.....
135. Ceiling joist.....
136. Deck or balcony joist.....
137. Porch rafters.....
138. Hip or valley flashing.....
139. Gable studs.....
140. Gable sheathing.....
141. Pergola beams and cross beams.....
142. Flooring.....
143. Ceiling.....
144. Ceiling or siding rail.....
145. Post or columns.....
146. Cove for above.....
147. Brick (or other) post bases.....
148. Newels.....
149. Beam and finish to case same.....
150. Moulding at floor and ceiling.....
151. Moulding for rail.....
152. Top and bottom rail and bal.....
153. Brackets, spindles, etc.....
154. Balcony post and rail.....
155. Porch step carriages.....
156. Treads, risers and moulding.....
157. Lattice and lattice frame.....
158. Porch screens.....
159. Glazed sash to enclose.....

INTERIOR WALL FINISH

160. Insulation.....
161. Wood lath.....
162. Metal lath for corners.....
163. Metal corner beads.....
164. Cement plaster.....
165. Finish plaster.....
166. Lime or sand for above.....
167. Furring.....
168. Grounds.....
169. Tile for bathroom walls.....
170. Tile base and floor.....
171. Wallboard.....
172. Panel strips, etc., for same.....

STAIRS

173. Main stair carriage.....
174. Landing joist.....

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175. Landing flooring.....
176. Wall and face strings.....
177. Base moulding for same.....
178. Starting treads.....
179. Landing treads.....
180. Treads.....
181. Nosings.....
182. Risers.....
183. Cove moulding.....
184. Well facing and trim.....
185. Starting newel.....
186. Landing newel.....
187. Stair rail.....
188. Gooseneck, etc.....
189. Balusters.....
190. Rail for stair well.....
191. Wall hand rail.....
192. Hall seat.....
193. Attic stairs or scuttle.....

OUTSIDE FRAMES

194. Front entrance frame.....
195. Front door frame.....
196. Rear door frame.....
197. Grade door frame.....
198. Balcony door frame.....
199. French door frame.....
200. Single window frames.....
201. Mullion window frames.....
202. Triple window frames.....
203. Other window frames.....
204. Cottage window frames.....
205. Drop sill window frames.....
206. Landscape sash frames.....
207. Casement sash frames.....
208. Fireplace sash frames.....
209. Stair sash frames.....
210. Vestibule sash frames.....
211. Piano sash frames.....
212. Closet sash frames.....
213. Gable sash frames.....
214. Dormer sash frames.....
215. Doors for above frames.....
216. Sidelights for entrance.....
217. Windows for above frames.....
218. Sash for above frames.....
219. Art or plate glass.....
220. Storm doors and sash.....

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INTERIOR FINISH

223. Panel doors.....
224. Transoms over.....
225. Sliding doors.....
226. French doors.....
227. Folding or accordion doors.....
228. Frames for above.....
229. Cased opening jambs.....
230. Arched opening jambs.....
231. Base boards.....
232. Base shoe or carpet moulding.....
233. Base moulding.....
234. Wainscoting.....
235. Panel mouldings.....
236. Wainscot cap.....
237. Plate rail.....
238. Closet base and shoe.....
239. Closet door and sash trim.....
240. Hook strips.....
241. Closet shelving.....
242. Hanger rods or slides.....
243. Clothes chute.....
244. Picture moulding.....
245. Chair or fixture rails.....
246. Beams for ceiling.....
247. Window and door casing.....
248. Backband for same.....
249. Cap trim.....
250. Window stool.....
251. Apron.....
252. Stool and cove.....
253. Subjambs.....
254. Door stops.....
255. Window stops.....
256. Astragals.....
257. Outside thresholds.....
258. Inside thresholds.....
259. Pantry and basement shelving.....
260. Corner beads.....
261. Colonades.....
262. Book case colonades.....
263. Book cases.....
264. Mantel shelf.....
265. Fireplace seats or book cases.....
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SMALL HOME

BUILDERS

Year Book

3rd Annual Edition
of 1,000,000 copies

WORLD'S FAIR EDITION
TWENTY-FIVE CENTS

Featuring—

Y. WORLD'S FAIR
DEMONSTRATION HOME
AND 30 OTHER SMALL
HOMES OF TOMORROW



**LAZY BONES
BEEN SLEEPIN'
IN THE SUN**



HIS HOME IS "WINDOW CONDITIONED"

● Thousands of mothers will tell you their children have been healthier and happier . . . catch fewer colds, since their homes were "Window Conditioned."

Thousands of fathers will tell you, too, that they have reduced their fuel bills up to 30% . . . that "Window Conditioning" usually pays for itself in less than two winters.

"Window Conditioning" means insulating your windows with two panes of glass instead of one. These two panes of glass—"double windows", (often called storm sash) turn cold into comfort.

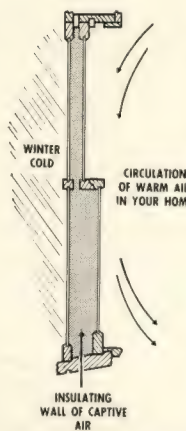
There's no problem in installing "Window Conditioning"—and remember there is a lot of cold weather every winter. If you have wood sash in your home, just call your lumber dealer . . . He'll figure your needs, handle everything, including F.H.A. financing with *No Down Payment*. If you have metal sash, the manufacturer's representative will gladly show you how you can have the comfort of "Window Conditioning."

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● With ordinary single-glazed windows the cold outside air chills the single light of glass to nearly its own temperature . . . Inside warm, humid air is chilled when it comes in contact with this cold glass, moisture in the air condenses as fog or frost on the glass. The chilled air drops to the floor and causes drafts and lowers room temperatures.

The diagram at left shows a double window with its wall of insulating air between the two panes of glass. This captive air keeps the inner glass much nearer room temperature, and retards heat loss through the glass, reduces drafts, fogged windows, and the drying out of the healthful moisture in the air.



AT THE NEW YORK WORLD'S FAIR you can see a completely "Window Conditioned" Home. Sponsored by The National Home Builders Bureau, this model home is equipped throughout with L-O-F Quality Glass. As an added feature, the Southern and Western exposures are glazed with AKLO Heat-Absorbing Plate Glass to keep heat out in summer.



Did you ever see a Dream BURNING?



Planning a home is not complete without planning its protection.

In studying the home life of such citizens as Washington, Jefferson, Madison and Monroe, it is interesting to note the emphasis such men placed on the planning, management and protection of their homes. These men not only believed in but took advantage of the protection offered by sound insurance. Today stock fire insurance is the safest and soundest protector of the hard-earned

FAMOUS AMERICAN HOMES

While the most famous American home is probably your own home or the one that you dream of building, you may be interested in the booklet, "Famous American Homes," which illus-



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59 MAIDEN LANE, NEW YORK, N. Y.

Please send me without obligation copy
of booklet, "Famous American Homes."

Name

Address

City

County State

(WRITE CLEARLY)

trates and describes
a number of homes of
famous Americans.
To secure this free
booklet, fill in, detach
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values invested in homes and their contents.

When you see someone's "dream of a home" go up in smoke, or otherwise become damaged or destroyed, these are the questions that arise in the owner's mind: *Am I insured in a sound Company? Am I completely and adequately insured? How will I be treated and how long will it take to settle the claim?*

Obviously, it is better to secure the answers to these questions before disaster occurs rather than take the chance of being disillusioned afterward.

The Home Insurance Company is America's leading insurance protector of American homes and the homes of American industry. Its representatives, located in practically every community in the United States, are ready and willing at all times to give you, without obligation, the benefit of their experience and expert knowledge in planning proper protection of your home and its contents.

The HOME INSURANCE
COMPANY
NEW YORK

A MESSAGE to Mr. and Mrs. America



IN presenting this revised (spring) edition of the 1940 Small Homes Year Book, we of the National Home Builders Bureau like to think of our publication as the meeting ground between the home building industry and the millions of American families with modest home-owning or rental budgets who say "We want a home of our own—show us the way!"

Our Bureau's service to the industry and to the public received splendid recognition when we were chosen to sponsor Demonstration Home Number One in the Town of Tomorrow at the New York World's Fair. This home is described in detail elsewhere in this edition of our Year Book. Replicas of this "Dual Duty" dwelling are being built as "model homes" in dozens of progressive American communities—perhaps in your city.

The point I want to make here is that the home sponsored by our National Home Builders Bureau is our challenge and basic recommendation to the building industry. Here Mr. and Mrs. America say,



"This is the kind of efficient, well-equipped, liveable home that we demand, however modest our budget. We believe that modern science and modern planning could and should give us in our new home nearly all of the important features found heretofore only in larger residences of the wealthy." Hence, the dual-duty rooms—hence, the wasteless planning.

The World's Fair Demonstration Homes (in the Town of Tomorrow), and this edition of our Year Book are expressions of what people want and what the building industry today can supply. (Furthermore, they are easy to own through the

liberal provisions of the Federal Housing Administration insured amortization loans.)

The National Home Builders Bureau possesses a unique background of experience in the small home building field in both its national and local (personal) applications. We have received letters from and answered thousands of people interested in building—attended

throughout the country—attended state and regional Lumber Dealer Association meetings. We have consulted with thousands of prospective home builders



seeking unbiased information on their building problems.

It is because of this vast and varied experience that we are able to offer you in this one volume a summation of up-to-the-minute information from all parts of the building industry. You will find this edition of the Small Home Builders Year Book compactly and thoughtfully organized. Most of your questions about home building problems are answered here, but conditions vary with localities and we urge that you consult your local experts—your lumber (and building material) dealers who can advise you properly on financing, planning and construction.



All of these people share our conviction that investment in a home of your own is truly an investment in happiness; all of them will be eager to lend a helping hand in your great adventure.

If there is any way in which we can be of further assistance to you, do not hesitate to write us about your problems.

W. Wadsworth Wood
President, National Home Builders Bureau, Inc.

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meetings for better housing all over the country—consulted hundreds of architects, dealers and manufacturers—investigated thousands of small home plans. We have visited model houses



The Happiness and the Wisdom of Home-Ownership

IN triumph and tragedy, the heart instinctively turns toward home . . . the one place in all this world where we can be apart, with our own . . . where the burden of praise and blame can be put aside, where life's broken threads can be mended, where new plans can be fashioned, new strength and courage marshalled, rest and renewal sought and found. The home is the shrine of personal and family life.

Those who have no home know the loneliness and heart-break of being outside lighted windows and closed doors—the distinction between a house and a home of one's own. Those who have known the security of a home built in faith and hope and love, can understand why men give their lives, without hesitation, in defense of their homes.

To build a home of one's own is to consummate the most completely satisfying joy of a lifetime. To make it grow from year to year in beauty and efficiency can be the happy job of a lifetime—a soul-satisfying record of practical achievement.

In the preparation of this Year Book every effort has been made to present thoroughly practical and pertinent information for the prospective builder of a moderate cost home. In the following pages you will find the answers to most of the problems which confront the prospective home owner—regardless of whether he plans to build or buy a new house. Design or select *your* home to meet *your* needs. Take into consideration the things you plan to do each day both for enjoyment and for household administration as required by *your* family. Then see that space in your plans is adequate and properly arranged to make easier all domestic activities. One very interesting and helpful proceeding is to go through your present abode and make a list of deficiencies or improvements which you believe should be incorporated in the home of your dreams.

In the design section which follows there are presented a number of small homes of various sizes and practical architectural designs. As explained, these are selections made from a large number of stock plans which are avail-

able to you at little or no cost through your progressive lumber and building material dealer. These plans may give you ideas. Perhaps some of them are exactly suitable for your needs. In any event you will find that your dealer has plan books offering an endless variety of suggestions among which you will probably find the home plan which you are seeking.

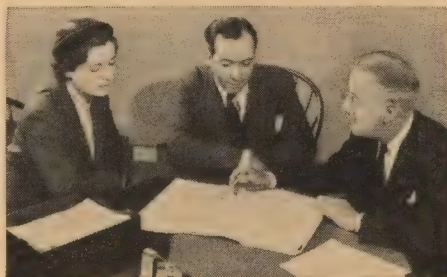
You will find that your lumber and building material dealer has a service which extends far beyond the sale of building materials and equipment.

Never in the history of our country were the joys and practical economies of home ownership so easily available to millions of American families as they are today. Financing is made easy as fully described beginning on Page 25. There is a broad selection of low cost home plans easily available to you. Your local lumber and building material dealer is prepared to help you in advice on planning, financing, selecting your contractor and providing all the necessary information which you require in connection with your problem. Naturally this dealer thoroughly understands all problems of home building. He knows market conditions—which means he can recommend the best of materials and equipment which combine with economy to create a satisfactory home investment.

In your community you will find a helping hand in every direction. Not only will the dealer be of invaluable assistance but you will receive intelligent cooperation from the contractor whom he recommends to build your house.

Your local home-financing institution will quickly remove all mystery from this business transaction.

Be sure to read the article beginning on Page 7 and entitled "Taking the Mystery Out of Home Building." Perhaps this will show you that the path of the prospective home owner is not beset with pitfalls as it was once. The prospective home owner of today is not the "forgotten man" of yesterday.



There is an expert in your community to whom you should take your home building problems—he is the progressive lumber and building material dealer—his specifications are like a doctor's prescription—you can follow them confidently.

These are Bargain Days for Home Builders

THE big news for the man and woman who are planning to build a home today is that all branches of the building industry have united to make the modern small home the biggest bargain in building history. The small house of today, like the modern automobile, makes the product of 10 years ago obsolete, expensive and inefficient.

Yet, with all these new refinements, comforts and conveniences, the 1939 home actually costs less than the home of 1929. Your building material dollar stretches farther than ever before. Here are some of the reasons why up to 40% more value is obtainable in today's modern small home:

BETTER DESIGN! More attractive — more practical — more liveable!

Realizing the growing demand for well designed, well built homes, leading architects, builders, dealers, and manufacturers throughout the country have joined hands in creating plans that utilize efficiently every cubic foot of space.

BETTER CONSTRUCTION! The FHA and other agencies interested in the small home field have devised methods of inspection that have brought about new high standards in specifications and construction.

PREFABRICATED UNITS! Today many units, such as door and window frames, interior trim, steel and woodwork assemblies, even complete kitchens, are available readymade. Lumber itself is standardized—dimensions in all types of structural products are standardized.

MORE COMFORT! A degree of comfort undreamed of ten years ago is now available in the modern small home, thanks to automatic heating and insulation in all its many forms.

LOWER MAINTENANCE COSTS! Recent years have seen the development of

many building materials possessing a durability and ease of maintenance unknown just a few years ago.

STEP SAVING! Housekeeping is much easier in the well designed modern home. More efficient room and closet arrangements, the new dual purpose rooms being pioneered by Demonstration Home Number One at the New York World's Fair, scientifically laid out kitchens . . . all these mean fewer hours spent in household



LOWER UPKEEP COST

ALL-AROUND INSULATION

AUTOMATIC HEATING

PRE-ASSEMBLED UNITS

CHEAPER, EASIER TO FINANCE

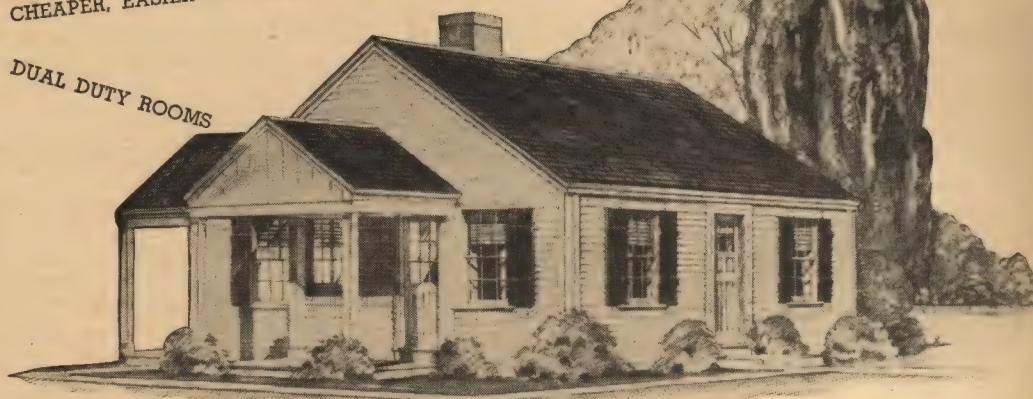
DUAL DUTY ROOMS

SCIENTIFIC LIGHTING

ARCHITECTS' COOPERATIVE PLAN SERVICE

MORE UTILITY SERVANTS
(Electric, Gas, Coal and Oil)

CHORE-PROOF KITCHEN



BETTER DESIGNED

BETTER BUILT

when houses were built even 10 or 15 years ago. They add hundreds of dollars in value and yet they are today standard features. The building industry and the architectural profession have kept pace with modern conditions and have created more comfortable homes, more beautiful homes, and more lasting homes, without increasing the cost.

By any standard of comparison, the compact, convenient efficient small home of today is infinitely better than its predecessors!

THE SMALL HOME "ARRIVES"

The fact is that the small home building field never until recently was properly studied by the building industry. Attention was concentrated on the larger homes. Architects and builders took pride in meeting the requirements

chores, more time for leisure.

GREATER SAFETY! Fire resisting insulating and building materials, more attention paid to ventilation, all help to minimize the dangers of the past.

EASIER TO FINANCE! Never before has it been so easy to finance the building of your home. Through a number of agencies long-term, low-cost financing makes it possible to pay for a new home out of very modest incomes—and the cost of this financing sometimes proves to be as much as 85 per cent less than former financing costs and less than rent!

These are plus-features in the modern home today that were not to be had

and even the whims of the builders of larger residences.

But during recent years recognition has grown among the leaders of the building industry of the enormous importance of the small home field. It was a lesson learned a decade earlier by the automobile industry.

Here in the small home field the industry at last recognizes its vast mass market and it is for that reason that the industry is turning to sources of information like the National Home Builders Bureau to learn what people of small and moderate income really want in a home and in its equipment and furnishings.

Taking the Mystery Out of Home Building

By C. STANLEY TAYLOR, Editor

(Director of Shelter Exhibits, New York World's Fair, 1939
The Town of Tomorrow and the Home Building Center)

THEY can no longer say he's the "forgotten man"—this new American home owner! Particularly is this true of the head of a family who has recently acquired (or is planning to build or buy) a moderate cost home. No longer is it necessary to make this investment, often the most important of a lifetime, in the bewildered "hit-or-miss" fashion of the past.

Today and for the future, a vast beneficent conspiracy has been set in operation to the end that Mr. and Mrs. America (and the little Americas) shall be enabled to reach immediately the desirable goal of home owning and without the hazards which heretofore have been almost proverbial. Gone are the vaudeville jokes of yesteryear—the villain who pursued the daughter waving a mortgage on the old family home. Gone are the heartaches and heartbreaks of "gyp" materials and jerry-builders.

Led by a paternalistic but practical Federal Government the banks and building loan organizations of America are heading an impressive parade toward home ownership. The part of the Federal Government in this tremendous procession toward the goal of home ownership is ably played by two factors known to all of us but understood by few. These are the Federal Housing Administration (popularly known as FHA) and the Federal Home Loan Bank (FHLB) which now plays a role that is growing rapidly in importance.

What Is 'Federal Financing'?

BRIEFLY, the Federal Housing Administration is a tremendous Federal insurance company which does not loan money directly to home builders but insures, under various titles, long-term loans made by banks, insurance companies and other types of mortgage lenders on new homes of moderate cost. Full details of the FHA plan are given beginning on Page 25.

The Federal Home Loan Bank acts primarily on behalf of building and loan associations somewhat as the Federal Reserve Bank has for years operated in the banking field. This organization was founded by the Government for the purpose of examining and placing under Federal control any sound building and loan association. It has liquefied the frozen assets which such organizations held in the form of

mortgage paper—thus making untold millions of dollars available immediately for the small home builder. It has Federalized such sound organizations to a point where the word "Federal" is incorporated in each name and incidentally where any investor in a Federalized building and loan association is absolutely guaranteed as to the safety of his investment.

As these two leaders in our great parade scatter untold millions of dollars to the right and left (under rigid control of plans and specifications) this golden trail is eagerly followed by all divisions of the building industry. These are the manufacturers of quality materials and equipment, the architects who make original plans for moderate cost homes, the contractors who build them (or the operative builders who will be explained later), and the lumber and building material or equipment dealers through whom manufactured products are distributed into the ultimate home. For the most part these component functional divisions of the building industry cooperate fully in the new American Home movement by planning and producing moderate cost homes which represent the maximum of efficiency, practicability and dependability. Most of them want to cooperate, but those who do not—who were the jerry-builders of yesterday or the manufacturers of inferior products—must perforce follow the magic wand of properly controlled specifications. In other words, this "forgotten man" of yesterday is surrounded by a series of safeguards so powerful that he cannot go wrong in his investment.

Practical Problems

NOW, with the brief foregoing allusion to the economic background, let us go back to the problems of Mr. and Mrs. America and point out exactly how one proceeds to consummate the transaction of a new home with a minimum of hazard and a maximum of quality and efficiency.

At this point it is necessary to point out the somewhat obvious fact that there are two distinct ways in which a good new home is acquired today. One is the buy a home newly constructed and offered for sale by the operative builder who is often called the developer-builder and the speculative builder. Such operations or developments of low-cost individual homes

are particularly familiar and to be found in the environs of our cities and larger towns. In smaller towns and rural areas such operations are practically unknown.

The other method is, of course, to select a plan and build one's own house, using as sources of guidance and assistance local dealers and contractors, finance institutions, utility companies and others who have a primary though selfish interest in adding more and better homes and home owners to the community.

Numerically, it is probable that approximately 40% of the new moderate cost homes are provided through operative builders. These operations are primarily concentrated near our larger urban centers. So for this type of house Mr. and Mrs. American go shopping. While this Year Book contains a vast amount of information of very pertinent value to such "shoppers" for existing new houses—it is primarily intended for the guidance of the major group of prospective home owners who plan, finance and build to suit their own needs and ambitions. It is to this latter group of many American home owners that this explanation is primarily addressed and particularly those who wish to acquire homes in the lower cost brackets—perhaps limited to a top figure of \$5000 or \$6000 as the cost of the house and its equipment.

Money to Build

WHEN the American family begins to think about building a moderate cost home—it is usually a dream to be achieved some day in the far away future through the judicious use of a carefully nurtured savings account. Right here we encounter the first drastic change. No longer must this dream be one of the dim and distant future. Today it is possible to borrow as much as 95% of the cost of the house and lot which does not exceed \$2500; 90% on homes costing up to \$5000; and 80% on homes above this amount up to approximately \$20,000.

Staying where we started in our low brackets, this means that the prospective home owner can borrow 90% of his investment and pay it off over a period of from 15 to 25 years in rent-like payments covering not only the gradual amortization of the mortgage but also taxes, interest, insurance and other items as explained in detail in the table shown on Page 28. This, of course, is provided that the family enjoys in some fashion an earned income

(Continued on page 66)

What Manner of House Shall We BUILD?

BEFORE you can answer this very basic question you should ask yourselves, husband and wife together, "What manner of people are we?"

After all, the house that is to be your homestead can be truly comfortable, liveable, beautiful, only as it harmonizes with its owner's way of life.

Broadly speaking this means that simple, quiet people appear to best advantage against an unpretentious background. The family that entertains frequently belongs in a different sort of "frame"—a house more ornate in character, with possibly a "play-room" layout designed to make entertaining a real function in the home!

More specifically, your house should express the daily life and habits of its occupants. What kind of living, for example will be carried out in your living room? Will there be a piano, a formal three piece chair and sofa set, bookshelves, a console radio and a fireplace? The ingredients of your living room ensemble dictate to a large degree the size and shape of the room and the placing of windows.

Then the master bedroom! Should it be large enough to use as a sewing room, or as an upstairs sitting room with the added charm of an open fireplace? In your imagination place the beds, dressing tables and other furniture just as you would like them, in relation to themselves and the windows and closets. You will find the room beginning to take shape in your mind's eye.

So, imagine your way through every room in your home-to-be—not forgetting hobbies and other special requirements. When you are through you will have the nucleus of a PLAN. Then, and only then, permit yourself the luxury of reflecting about the STYLE of the exterior.



CAPE COD

Each style in architecture grew out of characteristic room arrangements, and these in turn evolved from climate and social habits. The Cape Cod cottage, for example, had need for more room space on the ground floor than in

the sleeping loft above. If your family wants most of its rooms on the ground floor, the Cape Cod cottage style may prove appropriate.



GEORGIAN

The Colonial style in its almost modern simplicity of line reflects the hardships of pioneer American life. Condi-



COLONIAL

tions made it difficult to obtain building materials and hence the style was held to simple and restricted lines.

A subsequent development of Colonial days was the Georgian style created by



DUTCH COLONIAL

European architects brought to this country by Southern planters to duplicate the formal homes of the Continent.

Of even more ancient lineage is the Dutch Colonial style, dating from the New Amsterdam days. Gambrel roofs allow for full head room in the second floor; the small paned windows are also typical of the style.

Convenience and utility are the twin guides to the style called "modern." Maximum utilization of material space results from use of straight horizontal lines with slopes almost entirely eliminated.

Your preference for materials will exert a strong influence on the style of your house. If you like stucco or

painted brick veneer then the style should be along the lines of those originating in the Mediterranean countries or from the Spanish haciendas of early California and the southwest.



"MODERN"

Brick is a universal material, used in all countries, in all periods. Wood shingles and clapboards and other forms of board siding developed in countries where wood was plentiful and easy to work, notably here in America. Stone cannot be carried far, except as a veneer, so it usually has a local character, and is seldom used in houses of moderate cost.

DON'T MISUSE MATERIALS

The thing to avoid is the misuse of materials in a style that calls for some well established combination. A Spanish clay tile roof and a siding of hand-split shingles, for instance, do not mix.

Choose a style that fits your neighborhood. When a mortgage application is being examined for insurance, considerable weight is given by the examiner as to what is called "conformity to neighborhood." This means that a new house should look well in relation to the houses nearby.

Styles change in popularity, but good design never loses its appeal. Our Design Section presents an outstanding selection of good small house plans now available to the prospective builder.

As explained in the frontispiece to our Design Section, plans for any of the houses illustrated can be obtained by writing to the National Home Builders Bureau.

Headlining the fascinating array of small homes in our Design Section is our own Demonstration Home Number One at the New York World's Fair. Plans for this house are likewise available; in fact, the National Home Builders Bureau will gladly undertake to help you erect a replica of this house on your own lot. Ask your dealer to write to the Bureau for details.

To Pick Your Lot Use This *Rating Chart*

IN the search for a home site sooner or later you will find your choice narrowing down to just two or three lots. Then comes the problem of deciding among them. Few decisions you will ever have to make are more important.

Our rating chart, below, will help you to an intelligent, balanced decision. The most important factor of all, cost, is of course not included. Cost is a relative matter, varying in importance with the size of your pocketbook.

For "perfect" in each item score 10 per cent, for less than perfect reduce the rating accordingly. Add the ten scores for your total rating.



HOMESITE *Rating Schedule*

1. Neighborhood is most important for it embraces many things. Ideally, the location should be protected against influences that lessen values, such as the encroachment of industrial districts or the introduction of apartment houses among dwellings. Protection by means of good zoning laws or legal restrictions is highly desirable.

Score

2. A fairly uniform development of the neighborhood increases land values. The houses should be approximately the same age, size and general character. A new house among old houses is likely to suffer in value as the older homes get out of date. A small house among large ones will be at a disadvantage if the time comes when it must be resold.

Score

3. Land that is accessible to schools, churches, stores and amusement centers is worth more than land far away from these conveniences.

Score

4. Is the neighborhood served by a public water supply, fire hydrants, sewerage systems, electricity and gas? If you have to drill your own well, build a septic tank, put in your own lighting system or pay extra for fire

insurance, you should pay less for the land.

Score

5. The level of taxes and the likelihood of local assessments affect values. Do not be guided by the tax rate alone. It is the actual tax bill that counts. This bill may be lower in a town that has a high tax rate and places a low "assessed value" on property than in another community with a somewhat lower tax rate and high valuations.

Tax rates affect whole towns but special assessments may affect neighborhoods. These may be levied for new schools, utilities, paving or curbing, tree planting, etc. A location fully developed is worth more than one subject to assessments later on.

Score

6. The "appeal" of a neighborhood influences its value, because it makes people like it or dislike it according to its relative charm. The layout of streets, the presence of trees, the architectural attractiveness of existing houses, contribute to this quality of appeal.

Score

7. Sometimes the differences in physical character of two nearby lots will change their values. If one is rocky and the other clear, the latter

should be worth more than the former because of extra costs of blasting, excavation and grading. If one lot is well drained, the other wet, the difference in price should pay for installing drains. If one is sloping and the other flat, if one has good top soil and the other none, if one has trees and the other none, and if one has a good view and the other a poor one, the price should reflect the cost of making both equally desirable.

Score

8. Avoid a lot that is too narrow to give privacy between dwellings or one that is too long in proportion to its width. One that is too irregular for best utilization of space is also not desirable.

Score

9. Lots which are too exposed to wintry blasts as well as those situated in districts where the air is filled with smoke or subject to factory odors will not make comfortable home sites.

Score

10. Locate in relation to the place you want to play. Under modern conditions this is just as important as locating with relation to the place you want to work.

Score

TOTAL RATING

Your ABC's of

A-BUDGET

These are bargain days for home builders, P. 6. Happiness is a factor to be considered, too, by the home builder, P. 7. Insurance must be included in the budget—Home Insurance Company ad, P. 3.

B-PLAN

Select the style of your home with the utmost care, P. 8. In our Design Section, PP. 13-23, inc., we present 31 selected small house plans with an extended description of Home Number One at the New York World's Fair.

C-SITE

Our ten point home-site rating chart on P. 9 will help you select your location. It contains the principles of real estate appraisal in a nutshell. Consult the financing articles on PP. 27 and 28.

D-FINANCING

Learn on PP. 25-28, inc., how your present rent payments can build the home of your dreams, thanks to the liberal, long-term financing plans available today. Study the FHA financing chart on P. 28.

G-EXTERIOR WALLS

Eleven different varieties of exteriors are pictured and described on P. 34. Learn about Kolorite Process Red Shingles on P. 32 and Careystone cement siding on P. 37.

E-FOUNDATION

The essentials of good foundation and framing walls are described in diagram and photographs on P. 30. Don't skimp on this vital element in your house.

H-ROOFS

Six different roof materials are shown on PP. 35 and 37. See also P. 32. Study these ads—Anaconda Copper, P. 12; Kolorite shingles, P. 32; Edham shingles, P. 32; Certainteed products, P. 36; Philip Carey Company products, P. 37.

F-FRAMING

All of P. 31 is devoted to the essentials of good wood-frame construction practice. On this same page Weyerhaeuser's advertisement calls attention to the high cost of cheap construction.

I-INSULATION

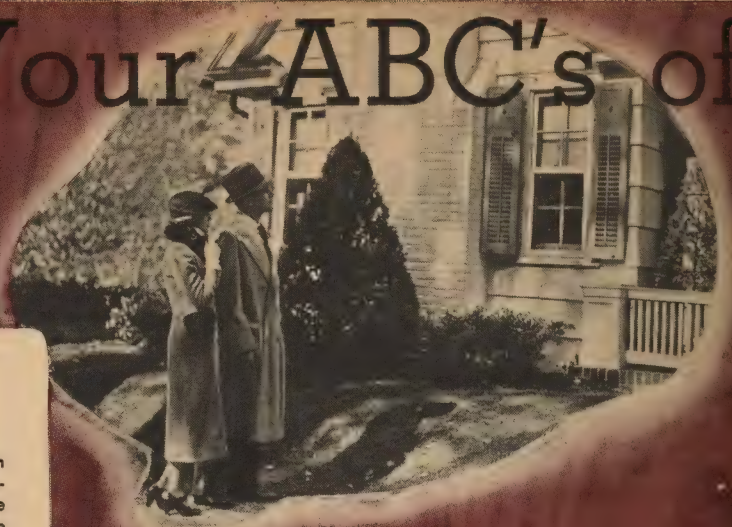
Learn how to save money with insulation, PP. 41 and 42. Complete insulation includes windows, too. Read ad by Libbey-Owens-Ford, P. 39 and ads by makers of insulation materials—Carey Rocktex, P. 37; Celotex, P. 40; Balsam Wool, P. 42; Nu-Wood, P. 46.

J-WINDOWS

The size shape and placing of windows affect the livability of your home see P. 38. The best quality is the best buy here, too. Read about Andersen's complete units, P. 38, and Libbey-Owens-Ford products on PP. 12 and 39.

K-INTERIOR WALLS

Our feature article on walls and woodwork on PP. 45 and 46 will give you a wealth of information. See also P. 33. See the ads on Nu-Wood, P. 46 and Trimpak, P. 46. Read also about the remarkable new Convenience Wall on PP. 73 and 74.



NOT long ago many dream homes never materialized because of the vexations and difficulties that beset the prospective home builder on every hand. Today the building industry in every department is organized to make home building the satisfying adventure it should be.

On these two pages we present a 26 point analysis of home building. Failure to give thought to any one of these points may some day lead to dissatisfaction and years of regretting that your requirements for living were not thought through more carefully!

HOME BUILDING

L-FLOORS

Turn to the picture layout on P. 48 for news of latest developments in flooring materials. See also P. 33. Advertisers include Cork Insulation Company, P. 48 and Sloane-Blabon Corporation (inside back cover).

M-WOODWORK

One of the major recent advances in small home construction is the production of pre-assembled woodwork. The complete story is on PP. 45 and 46. Under this heading we mention again the Convenience Wall described on PP. 73 and 74.

N-PAINTING

In no step in small home construction is it more important to buy wisely than when you purchase the paints for interior and exterior use. See P. 49, also P. 33. Refer to the ad by Moore Paint Company on P. 49.

O-HARDWARE

Door knobs have gone colorful. See P. 44. See also P. 33. Consult the advertisement for Lockwood Hardware on P. 44.

P-WIRING

Have an eye to the future when you install the wiring in your new home. The wiring "entrance" is important, it must be adequate. Read the article on P. 50, see also P. 32 and the ad by the Square D Company on P. 50.

Q-LIGHTING

The lighting in your new home must not only be ample, but properly placed and of proper quality. P. 77. On P. 78 is a diagrammatic analysis of lighting fixture needs of the small home. See ad by John C. Virden Company, P. 78.

R-HEATING

The feature article on PP. 52, 53, 54 is rich in information. See also PP. 32, 47, 61. Study the advertisements on the Heatilator, P. 47; and equipment by Weil-McLain, P. 53; Burnham, P. 53; Mueller, P. 54.

S-BATHROOM

Money-saving hints on equipping and decorating will be found on PP. 63, 64, 65. Refer to ads by Crane, P. 64; Gibbs Boardtile, P. 65; Columbia Metal Box, P. 65; Remington Rand Shaver, P. 65.

T-KITCHEN

On PP. 55-59, inclusive, you get all the latest news about kitchen planning and new equipment. See also P. 33. Study the ads by Ilg, P. 55; Servel, P. 56; Pyrofax, P. 57; Hobart, P. 57; Hotpoint, P. 59; Monel, P. 60.

U-LAUNDRY

In the modern basementless house the utility room is of great importance. It contains the home laundry, scientifically arranged for time and energy economy. See P. 61 and P. 62 and the Bendix ad on P. 62.

V-PLUMBING

Go behind the scenes with the plumber on P. 43 to learn what distinguishes good plumbing from bad. This, too, is no place to skimp when building your home. Refer also to PP. 32 and 33.

W-LANDSCAPING

It is easy to make mistakes in laying out the grounds around your new home. Learn on P. 24 how to put Mother Nature to work according to a carefully pre-determined plan.

X-GARAGE

Among the many advances credited to Home Number One at the New York World's Fair is the multipurpose garage. Read on P. 79 how it may become your party room, exercise room or home work shop.

Y-FURNISHING

This is the subject of most of the pages in our Decorating and Furnishing Section, PP. 67-81, inclusive. Consult ads by Wurlitzer, P. 69; Heywood-Wakefield, P. 70; Lullabye, P. 75; Pleasantaire, P. 78; Rittenhouse, P. 80; Hoover, P. 81; Remington Rand, P. 81.

Z-DECORATING

You will profit by reading every word in our Decorating and Furnishing Section, but particularly the story on "how to start" on PP. 68 and 69. See ads by Singer, P. 74; Libbey-Owens-Ford, P. 76 and Clopay, P. 80.

"I WANT *Big windows* ... AND PLENTY OF THEM!"

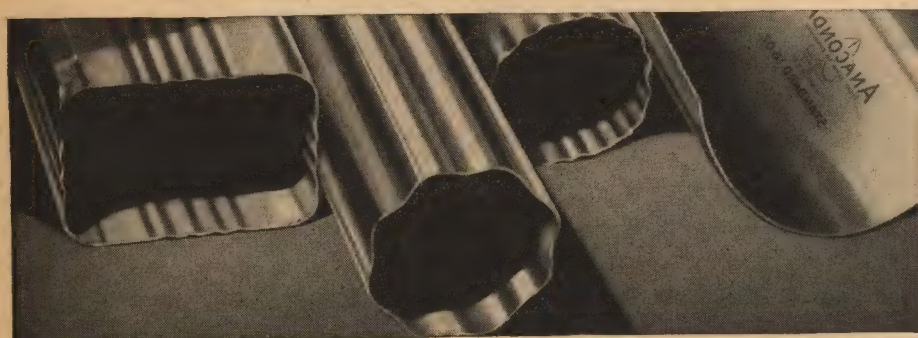
● That's the pointed plea that women make for homes. They want windows—big, bright, cheerful windows that lend individuality and charm, make a room light and more livable.

And large window areas, corner windows and picture windows, are just as practical and attainable in the small home, as in the mansion. Even L·O·F Quality Glass is inexpensive, and when you consider its beauty and sparkling clarity, you will find it one of the most economical of building materials.

This is the Glass Age! When you build, build in happiness and comfort for years to come—with windows. You'll find your architect or builder will welcome the suggestion. Insist on L·O·F Quality Glass—it costs no more than ordinary glass. Libbey·Owens·Ford Glass Company, Toledo, Ohio.



LIBBEY·OWENS·FORD *QUALITY GLASS*



For House No. 1 in Town of Tomorrow at the New York World's Fair, an extra \$40 pays for gutters and leaders of 16-oz. Anaconda Copper. A small sum for lasting freedom from rust-repairs and replacements.

Save Money with Anaconda Copper for gutters, rain-pipes and roof flashings

It will be far cheaper in the long run to rustproof your new home with Anaconda Copper. Metals that rust require frequent painting and repairs, and occasional replacement. Anaconda Copper, which *cannot* rust, is the most durable material you can buy for exposed sheet metal work. It saves far more than its

extra first cost because it will last for so many years.

Anaconda Copper Tubes for hot and cold water lines likewise offer lasting protection against rust—and their cost installed with Solder-type Fittings is scarcely more than that of rustable piping.

Anaconda "Electro-Sheet" Copper bonded to asphalt-

impregnated building papers or coated with asphaltic compounds makes an ideal product for window and other concealed flashings, shower pans, wall lining and vapor-seal, and foundation waterproofing.

For further information on these and other non-rusting Anaconda Products for the home, write for our free booklet B5-S.



TERMITE-PROOF YOUR HOME!

In localities infested with termites, it is advisable to cap foundation walls with copper termite shields. Write for free booklet on Termite Control.

THE AMERICAN BRASS COMPANY

GENERAL OFFICES: WATERBURY, CONNECTICUT

In Canada: ANACONDA AMERICAN BRASS LTD., New Toronto, Ont.

Subsidiary of Anaconda Copper Mining Company

DESIGN



IN this section of the Year Book you get the thrill of "window-shopping" for the home of your dreams.

On display here you will find a true "Hit Parade" of practical small homes. The editors have selected these as typical of the hundreds of "stock plans" now available to homebuilders through progressive lumber and building material dealers in every community. Complete plans and specifications, ready to build every imaginable type of good small home, may be obtained from your dealer at little or no charge. A full explanation of this amazing service will be found in the article "Taking the Mystery Out of Homebuilding" which begins on Page 7.

Many thousands of "live" building material dealers everywhere are enabled to offer Mr. and Mrs. America this service through an organization known as National Plan Service (Chicago) where complete plan books, plans and plan changes are created for distribution solely through your local lumber and building material

dealer. Manufacturers and associations of the building field also render such service to homebuilders through dealers.

All plans of National Plan Service are prepared by architects licensed to practice in practically every State. Each plan also conforms to F.H.A. insured loan requirements. Our selection of the several following plans is based entirely on practicability and popularity.

Naturally the editors take the advantage of leading this "Hit Parade" with our own "Dual Duty" Home—which was Demonstration Home No. 1 in the Town of Tomorrow at the New York World's Fair, 1939. Dozens of replicas of this house are being constructed by progressive builders in many of our leading cities and publicised as examples of good, modern practice in the design, construction and equipment of today's small home.

Editor's Note

THE *floor plan* is the important thing for you to decide on . . . before the kind of exterior! The floor plan shows the location of rooms and relation to the rest of the house. Only you can decide on what you want and what you need.

A good way to start is to go over your present home . . . beginning at the front door and ending at the exit . . . and decide how each room plan and relationship could be improved to be ideal for you and your family. Make a list of the changes and sketch out the ideal plan for your family. It doesn't have to be drawn by a professional to give you an idea . . . but it will be of tremendous help in studying the House Designs and Floor Plans on the following pages.

The exterior design should be in keeping with the kind of interior you plan. In other words, if you want a simple modern interior, do not plan to build a Spanish castle exterior! If you will imagine the effect you want to create for your family and make the exterior a charming envelope for the practical interior—then you will be pleased and successful with your new home.

The kind of exteriors are discussed on page 34. The plans on the following pages can easily be adapted to brick, concrete block or wood. Only remember that certain types of architecture are better in certain materials than they are in others. (Page 8).

There are certain principles of a wise investment in a moderate cost home. For the exterior design *always keep to simplicity*. In the first place, simple, straightforward exterior construction costs much less. Every time you add an angle or return in the plan of your exterior walls—you add definitely to the cost of construction. If ever the time comes when you want to sell this house, you will find that the simple exterior is attractive to many more potential buyers than if you employ a "trick" exterior which might appeal to few.

Use your ingenuity and imagination to make the interior plan as practical and charming as possible. In this way only can you protect your investment—and enjoy the maximum in living comfort!

An Industry Parades for the HOMEBUILDER in the TOWN OF TOMORROW

**Over 1,000,000 People Paid to See This Feature of
THE NEW YORK WORLD'S FAIR, 1939**

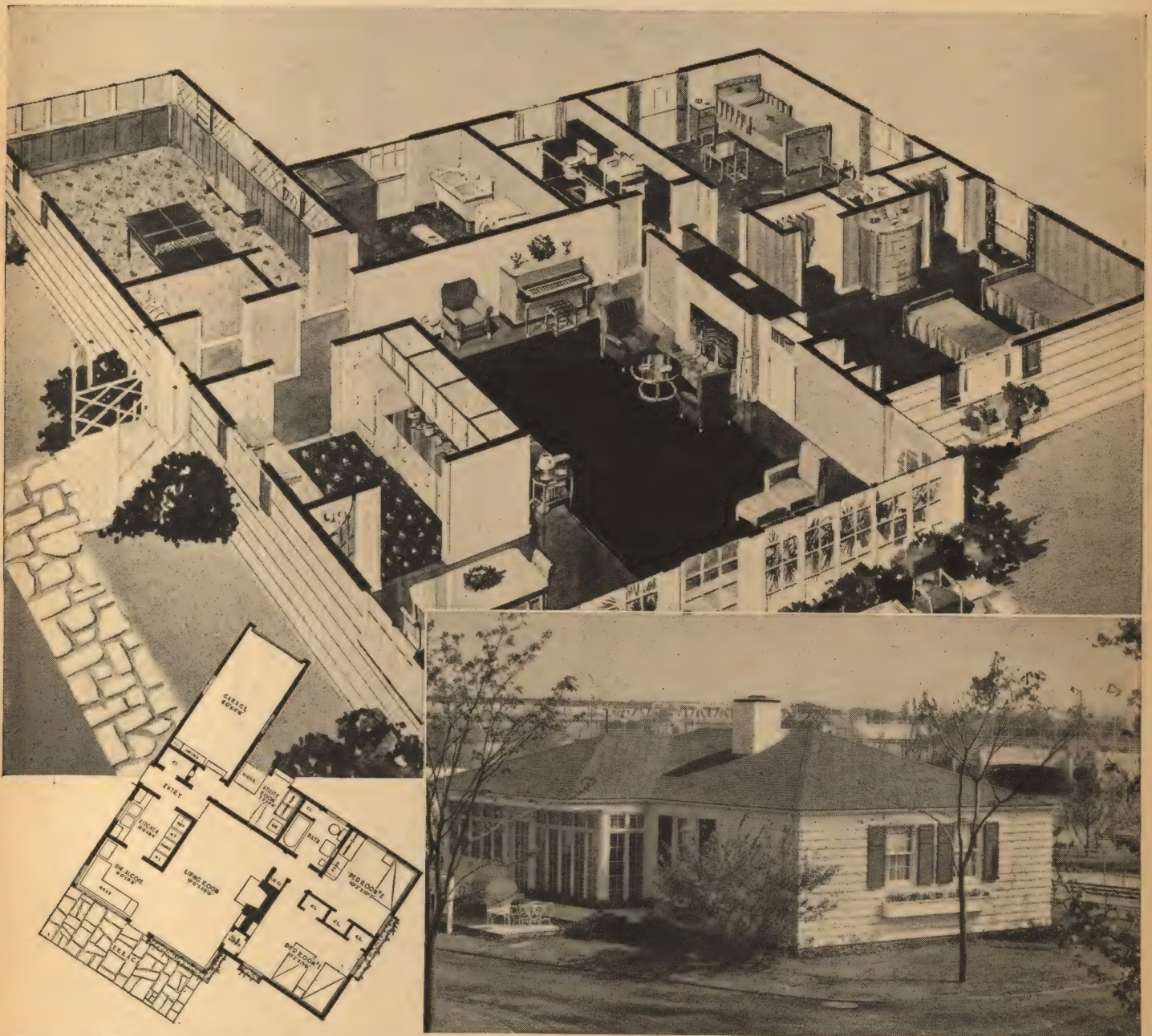
SENSATION of the N. Y. World's Fair "Town of Tomorrow" is the highly practical Demonstration Home No. 1 developed and sponsored by the National Home Builders Bureau under the planning theory that each room, even the garage, shall have a multiple function contributing to the convenience and comfort of a modern family of moderate means.

The plan of this house features a definitely new mode for modern living by developing the idea of "Dual Duty"

rooms. The findings of the Bureau, as indicated by this plan, are that the small home builder of today wants, in variety of function and extension of comfort, a home containing several times the efficiency of similar sized homes of just a few years ago.

The development of the "Dual Duty" rooms, as here exemplified, represents an outstanding advance in the Bureau's drive to create the type of small home which offers the "new mode for better living."

On Page 66 will be found the names and products of manufacturers who cooperated in this "Dual Duty" Home at the New York World's Fair and in Replica Homes being built in many communities.



Replicas of Our Demonstration Home Number One, Pioneering a New Idea as the "Dual Duty" House, Are Being Built in Scores of Cities Throughout the United States.

THE OTIS

The English type of cottage finds many adherents among the discriminating builders. Planned for five room efficiency and large attic space.

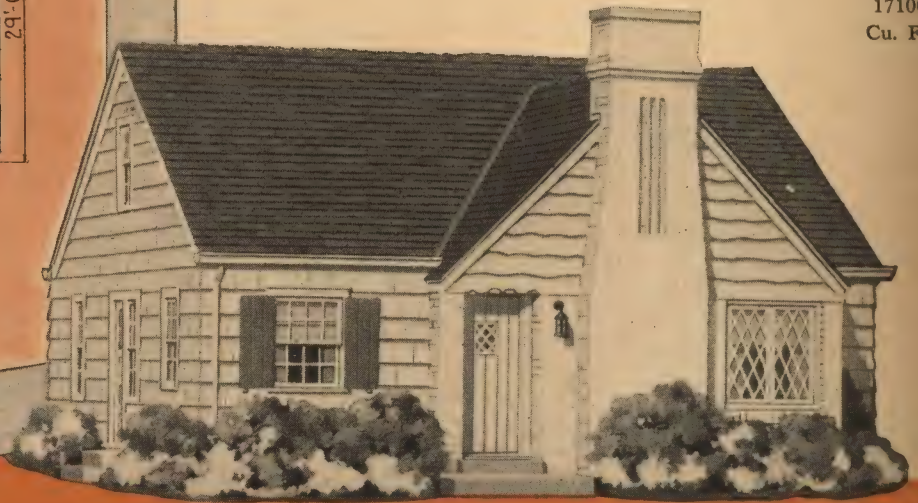
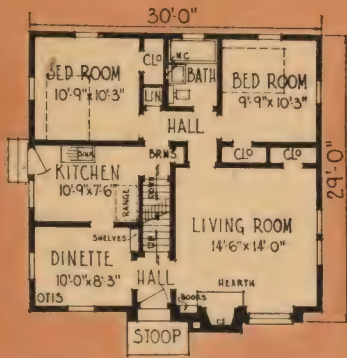
DIMENSIONS

SIZE OF MAIN BUILDING.....30'0" x 29'0"
CEILING HEIGHT8'0"
HEIGHT OF BASEMENT7'0"

Cubage

17100

Cu. Ft.



THE OAKLEY

Five rooms with stairway to large attic space. This is a type of Early American home that always will be appropriate for any locality.

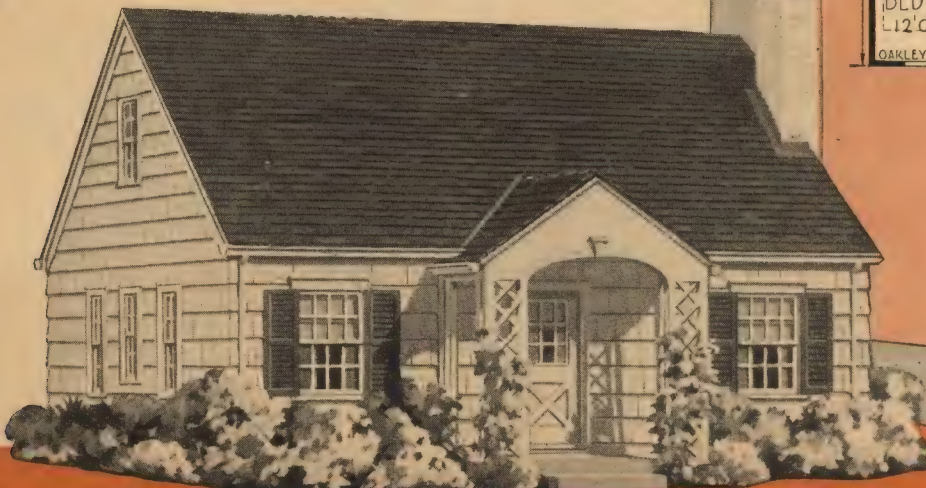
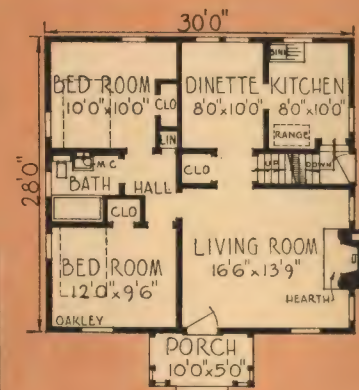
DIMENSIONS

SIZE OF MAIN BUILDING.....30'0" x 28'0"
CEILING HEIGHT8'0"
HEIGHT OF BASEMENT7'0"

Cubage

18300

Cu. Ft.



THE ELLENCOTT

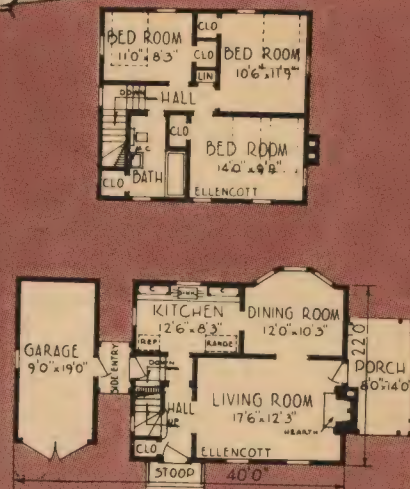
The Colonial style of architecture is more closely associated with American history and traditions than any other type. Its simple symmetry of line and air of dignity truly reflect the culture of early New England.

DIMENSIONS

SIZE OF MAIN BUILDING	26'0" x 22'0"
CEILING HEIGHT FIRST FLOOR	8'0"
CEILING HEIGHT SECOND FLOOR	8'0"
HEIGHT OF BASEMENT	7'0"

Cubage

House	15730 Cu. Ft.
Garage	2100 Cu. Ft.
Porch	560 Cu. Ft.
Total	18390 Cu. Ft.



THE ONARGO

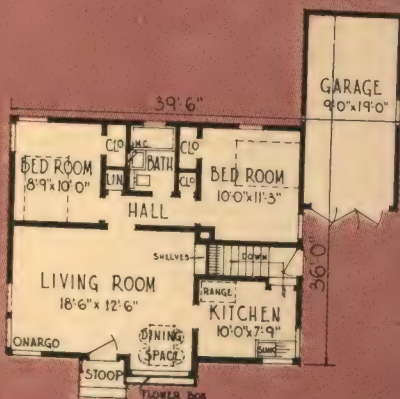
Charmingly modern on the inside as it is on the outside, this complete little home will find a lot of favor with those desiring a garage in a practical location.

DIMENSIONS

SIZE OF MAIN BUILDING	30'0" x 24'0"
CEILING HEIGHT	8'0"
HEIGHT OF BASEMENT	7'0"

Cubage

House	13000 Cu. Ft.
Garage	1900 Cu. Ft.





Cape Cod Simplicity.

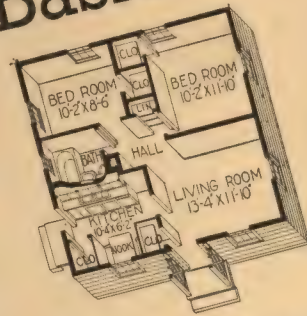


A Corner Windowed Cottage.



Modified Modern.

Seven Versions of One Basic Plan



The house designs on this page are all exterior variations of one basic floor plan. They are large enough to provide for comfortable living yet small enough to be built at lowest possible cost.

To the American family with one or two children, these efficient individual homes offer tremendous advantages over flats, apartments or "rooms." In most communities they may be purchased on an all-inclusive monthly payment of about \$20.



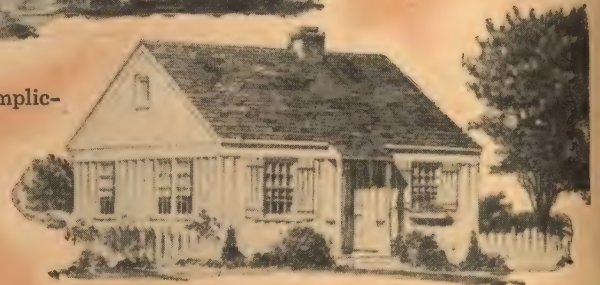
In the Town of Tomorrow at the New York World's Fair the above is Demonstration Home Number Six, sponsored by the National Lumber Manufacturers' Association and the National Retail Lumber Dealers' Association. With two extra bedrooms on the second floor the house provides comfortable quarters for a family of six. As presented at the Fair the house would cost approximately \$3,000, including garage.



Farm House Simplicity.



A Cozy Shingled Version.



For the Suburbs.

DEMONSTRATION DESIGNS

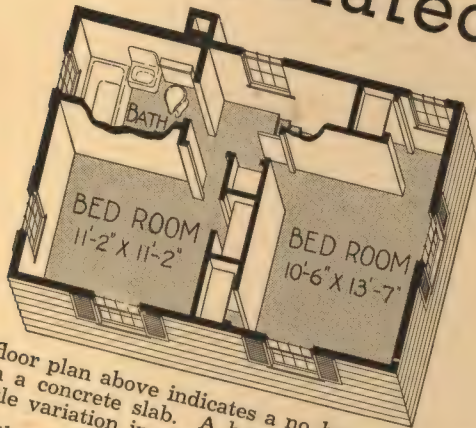


Here the garage replaces the porch to make the house look larger.

Simplicity of line relieved by a decorative Colonial doorway.

The end of the house here is turned to the street to permit use of a narrower lot.

—Six Related 2-Story Designs

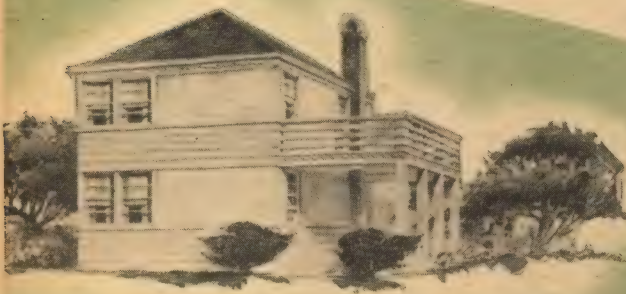


The floor plan above indicates a no-basement house, built on a concrete slab. A basement may be added with little variation in plan.

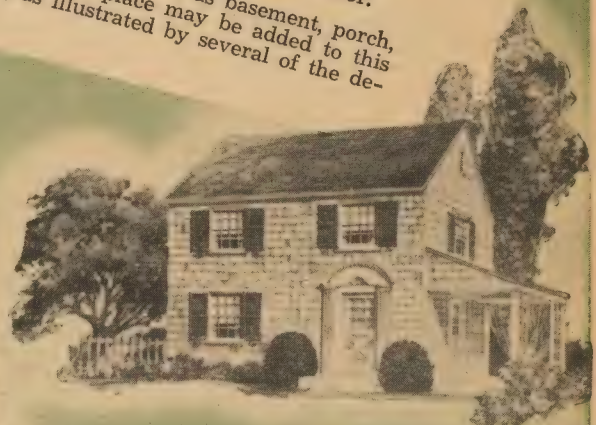
All of the designs shown on this and the facing page have been produced by the Technical Committee of the National Small Homes Demonstration program, sponsored by National Lumber Manufacturers' Association. The houses illustrated on this page again represent

exterior variations of one basic floor plan. They are all five-room designs of rectangular form which permit a given amount of material to enclose a maximum of cubage with the least possible man-hours of labor.

Note that various features such as basement, porch, garage and extra storage place may be added to this fundamental plan, as illustrated by several of the designs shown.



Corner windows and a flat porch deck strike a modern note.



Here you add an open porch and change to wood shingled sidewalls.



A flat garage roof permits a second-story sun deck.

THE EUSTACE

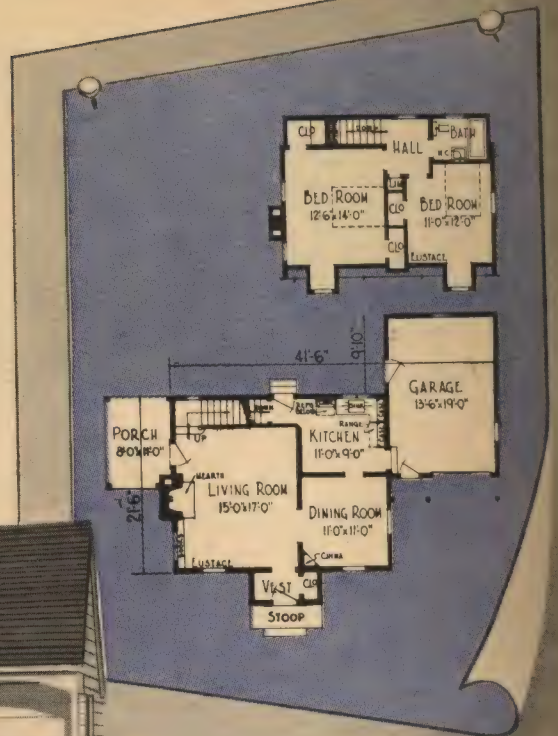
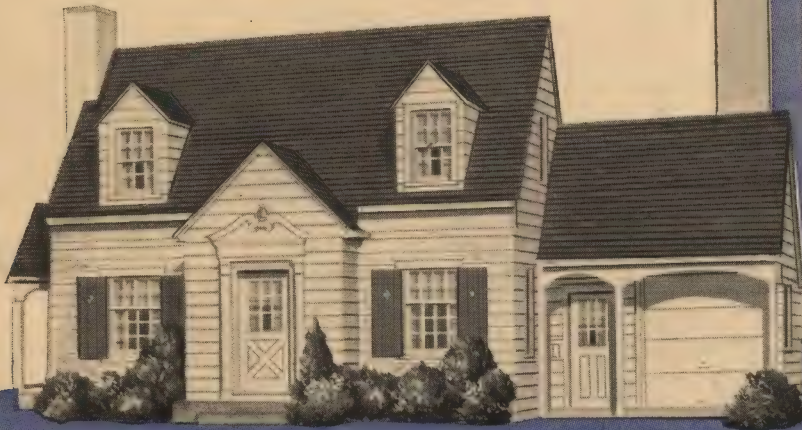
An exceptionally well designed five room Early American home that merits careful consideration. Note the attached garage and the desirable porch.

DIMENSIONS

SIZE OF MAIN BUILDING.....27'6"x21'6"
 CEILING HEIGHT FIRST FLOOR.....8'0"
 CEILING HEIGHT SECOND FLOOR.....7'6"
 HEIGHT OF BASEMENT.....7'0"

Cubage

19,400
 Cu. Ft.



THE ELDON

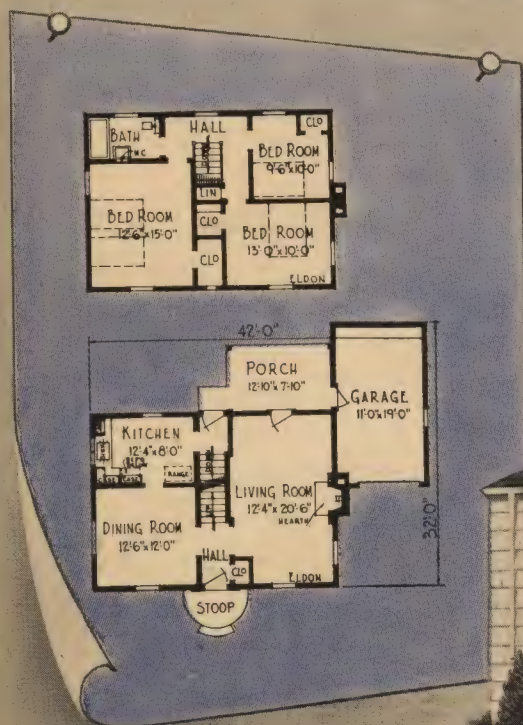
Six well planned rooms, an attached garage and a rear garden porch combined with the handsome Colonial exterior complete this desirable home.

DIMENSIONS

SIZE OF MAIN BUILDING.....30'6"x21'0"
 CEILING HEIGHT FIRST FLOOR.....8'0"
 CEILING HEIGHT SECOND FLOOR.....7'6"
 HEIGHT OF BASEMENT.....7'0"

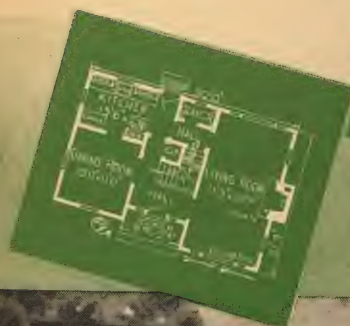
Cubage

21300
 Cu. Ft.



Colonial

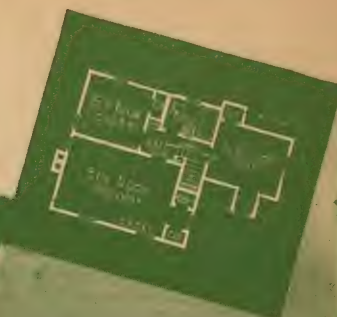
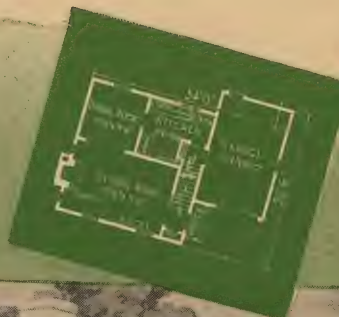
Beauty



This six-room house is distinctly modern in the space economy of its plan.

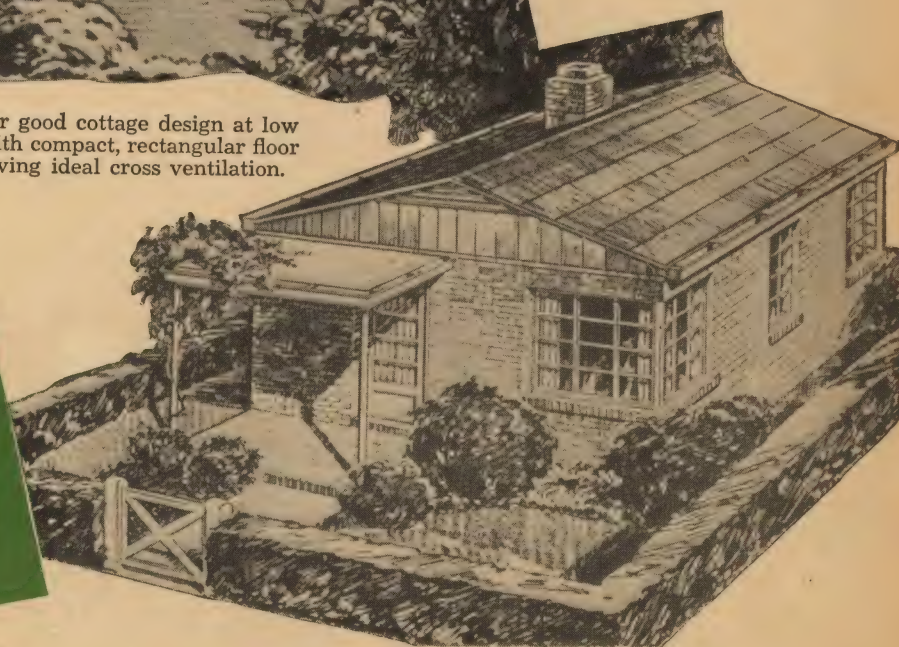
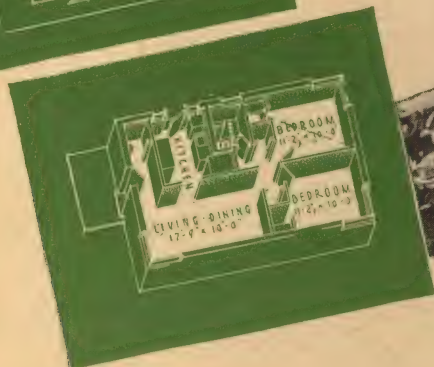


The popular attached garage plan executed in Colonial style.

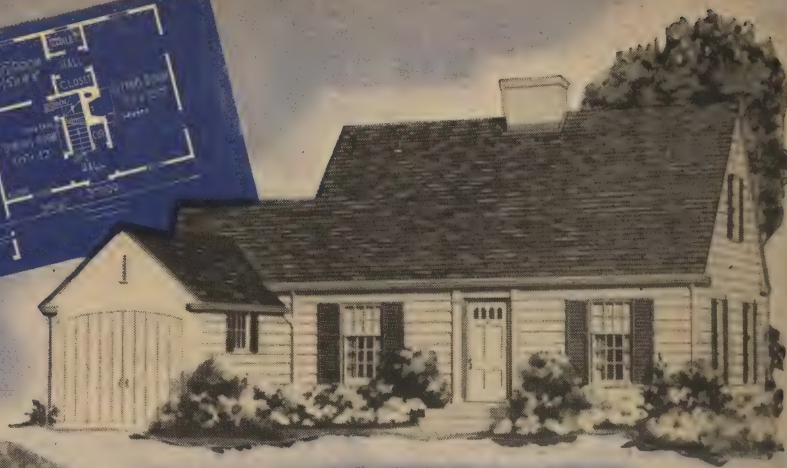
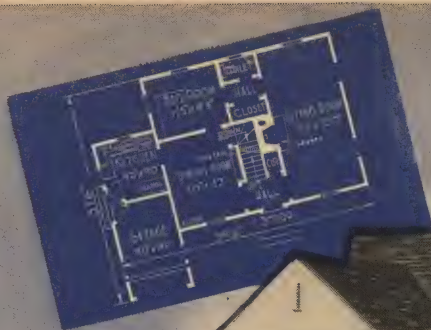


**Charm of
Clay Masonry**

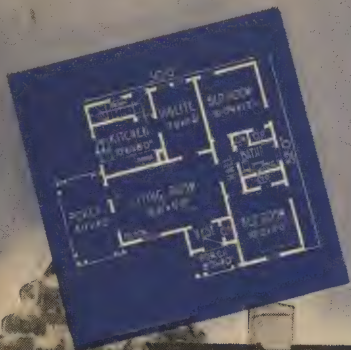
Another good cottage design at low cost, with compact, rectangular floor plan giving ideal cross ventilation.



The unusual corner windows give a touch of the modern to this "Economy" design in brick.



23. Cape Cod in design, this house has an attached garage and possibilities for two extra bedrooms in the attic.



24. Trellised columns and shingled sidewalls here give an atmosphere quaint yet modern.

There's New Variety

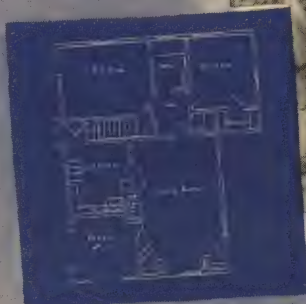
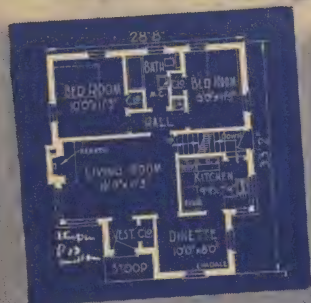
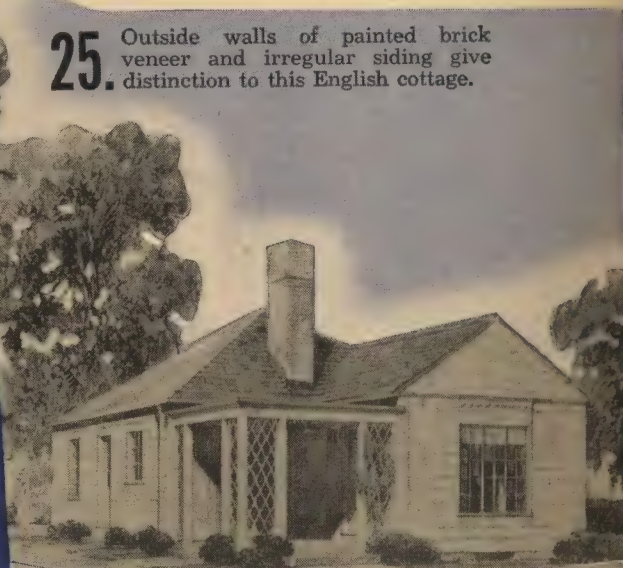
"THE Job and Joy of a Life Time," "Invest in Happiness," are phrases you read at the beginning of this Small Home Builders Year Book. Don't smother that impulse to own your own dream home. Remember that all that stands between you and home ownership nowadays is a simple decision to "do something about it."

As you study the distinguished group of one-story homes on these last two pages of our Design Section bear in mind that today building a home of your own is easier than ever before—and never again in your lifetime will your dollars buy more lasting satisfaction.

Read with close attention the pages in the next section devoted to financing your home. See what an easy step it is from renting "space to sleep and eat in" to buying, on rent-like payments, the home you want.

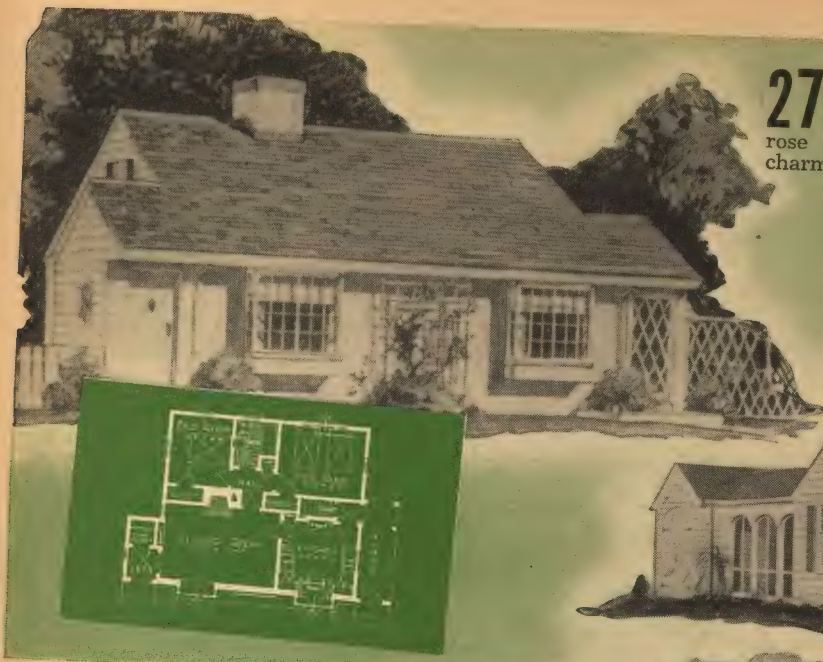
The trend to small homes of one-story design is nation wide. People are moving to the suburban areas

25. Outside walls of painted brick veneer and irregular siding give distinction to this English cottage.



26. The shingle and clapboard exterior of this English cottage is dominated by a chimney of painted brick.

In writing National Home Builders Bureau be sure to mention design number.



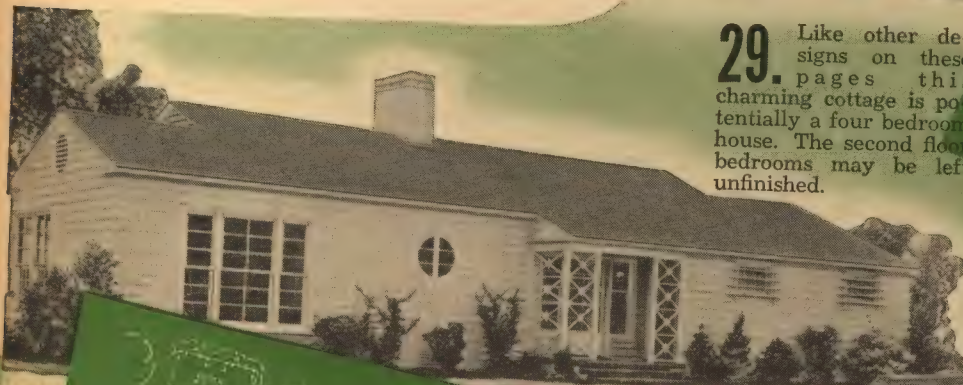
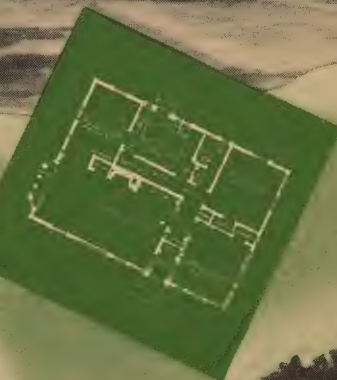
27. Two great mul-lioned bay win-dows flanking a rose bush trellis give charm to this exterior.



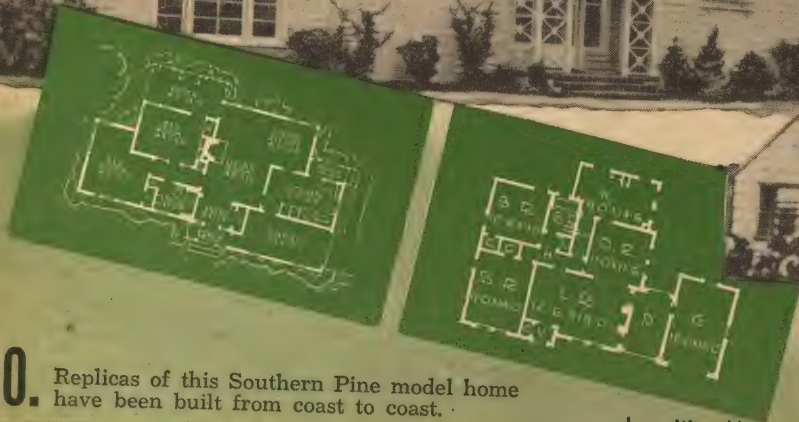
28. This Cape Cod cottage shows blue shutters against white side walls of pine clapboard topped by a blue cedar shingle roof.



29. Like other de-signs on these pages this charming cottage is po-tentially a four bedroom house. The second floor bedrooms may be left unfinished.



30. Replicas of this Southern Pine model home have been built from coast to coast.



31. A roof shelters the path to the garage in this attractive design. Note the surprisingly large living room.

In writing National Home Builders Bureau be sure to mention design number.

in One-Story Designs

where land costs are not so high, and here among the other advantages of healthful living they are building houses like those pictured here. These efficient "machines for living" have made completely obsolete the old fashion up-and-down monstrosities that made housekeeping a nightmare and represented a minimum of comfort at maximum cost.

The first three one-story houses on the left hand page were created by architects for the National Plan Service, Inc. Design #26 is the All-Ohio Gas Demonstration Home. On this page Designs #27 and #29 are copyrighted by the Architects' Co-operative Plan Service, Inc. Design #28 is the Western Pine Home on exhibition at the Golden Gate Exposition in San Francisco. Design #30 is the Southern Pine Association model home. Design #31 is sponsored by the Architects' Certified Homes Association.

Invest in HAPPINESS

a banker's viewpoint

WE bankers are supposed to be a cold blooded lot. Whether we are or not, the fact remains that we are trained to look at things analytically, to take situations apart to see what makes them "tick" or fail to do so.

Home ownership? Do you want an unemotional appraisal of the question from a banker's viewpoint?

I am a perfectly matter-of-fact, perfectly "hard-boiled"—as my youngster puts it—when I say that for most men and women the years and the money spent in acquiring a family home are, after insurance, the best investment of all, an investment in happiness!

Happiness springs from many sources, one of them a feeling of economic security. In my experience more people have started on the road to financial independence through home ownership than in any other way. Your cash equity in your home increases your credit standing everywhere, including my bank. If someday you must relocate in some other city and hence have to sell, you get back most of, often more than, the money invested. Rent receipts have no resale value!

In the long run you live less expensively in your own home than in a rented one. Statistics show that you can occupy and pay for a home at approximately the same cost that you pay as rent for an apartment of the same size and class. When you have completed your payments you live in your owned home much more cheaply, of course, than in rented quarters. Over a period of years you are definitely money ahead by buying and occupying your own home.

By the time you want to retire you are finished with your home buying



R. I. Nesmith & Associates

program and can afford to travel or indulge in other luxuries. In the event of adversity the home is at least a roof over your head or may be sold for cash.

Happiness dwells, too, in what is called adjustment to your environment. From home ownership, particu-

A sense of personal improvement is another factor in happiness. The responsibilities of ownership, in meeting emergencies and financial payments, are a first rate mold of character.

The home owner can buy furniture and decorations of better and more satisfying quality, because they are acquired to fit a decorative scheme that will last for years, instead of having to be changed periodically as you move from one rented place to another.

Watch your children develop in that home of your own. As part of a family that has its own place in the sun they will be closer to you, will grow up with a sense of responsibility and a respect for private property that will be invaluable in their later years.

Much of what the psychologists and child training experts have been telling us during recent years boils down to the fact that early environment is of tremendous importance in establishing the lines of subsequent character development.

This fact alone should swing the decision to home ownership with thoughtful parents who recognize that nothing in the world is more important than giving the younger generation their proper start in life.



Ewing Galloway

larly if you take an interest in community affairs, come pleasurable and profitable business and social contacts. In your neighborhood you make friendships that endure for many years. Your children have the opportunity to meet and grow up with the right sort of youngsters.

FINANCING



THE modern path to the goal of debt-free home ownership is very different from the old hazardous and uncertain method of short-term first and second mortgages, excessive commissions and renewal fees. The new and better way is described on the following pages.

A dollar a day, and even less, under the present insured amortization system will buy a comfortable home. You start with a down payment of only 10 to 20%. (And there is also provision for moderate priced homes with the down payment of only 5%.) Then every month for a period from 15 to 25 years you make uniform payments, which include payment on principal amount, interest, and mortgage insurance; and a percentage of your annual taxes and fire insurance.

The difference in cost between the old system and the new represents a substantial saving—money in your pocket—money available for new comforts in the home of your dreams!



How Rent Payments can buy the Home of Your Dreams

(Editor's Note: Want to have some fun? Probably you do not save your rent receipts, but you know how long you have been paying rent. Work out a rough esti-

mate of what the amount has been. Perhaps, like P. A. Jackson, you will be astonished at the size of the figure.)

by Philip A. Jackson

SOME people save string!
Some people save paper match covers!

For twenty-five years my hobby, if I may call it that, has been — saving rent receipts. There's a drawer full of them now, close to three hundred, representing money gone over the dam to the tune of about \$16,000.

In their various shapes and colors they remind my wife and me of the many characterless apartments and unsatisfactory houses we have drifted in and out of during the years of our nomad wanderings.

Why are we today, nearing our fifties, without the most prized of man's possessions—a home of our own?

Looking back, it is a matter of bitter regret with us that our marriage partnership has never been brightened by the shoulder-to-shoulder adventure involved in building and paying for a home of our own—by the creation, to use an old fashioned word, of a homestead. We have never known the thrill of shaking hands with the landlord for the last time!

Have we been fair to our children, two of them now grown and married? Ruefully we admit the answer is "No." They have never "taken root" anywhere, never grown up with a group of neighborhood friends, never known the pride and comforting security that springs from a permanent, well loved background for the days of a family's life together.

Two reasons, as my wife and I think back, kept us from the joys, and the responsibilities, of home ownership.

The labor saving conveniences and compactness of the various apartments we have lived in was obstacle number one. The extortionate (we considered

it so) cost of financing was obstacle number two.

As we see it, neither difficulty exists, in this year of grace 1939, for our married son and married daughter. If our experience and counsel carry weight, they shall not make our mistake.

Take the matter of step and muscle saving appliances and floor layout. The new homes of today, even in the most modest price classes, are designed as truly efficient "machines for living." The carefully planned kitchen of 1939 is just one expression of the study that unnumbered architects and builders have applied to every square foot, from

Every month, year in year out, you pay for shelter. The renter is on a treadmill, going nowhere. The home owner each month is increasing his equity, going straight toward his goal and symbol of his independence, a home of his own.

basement to attic (I know that some modern small homes have neither!).

Automatic heat and all it means in release from drudgery is another symbol! In my mind it stands for the whole list of appliances—refrigerators, cooking ranges, water heaters, vacuum cleaners, and so on—that make the modern small house almost "chore proof." During the past ten years the cost of such appliances has been reduced about 75%, while they have





steadily improved in construction and efficiency of operation. The home of today repeats the well known story of the automobile all over again—more for your money today than ever before.

STREAMLINE FINANCING

Home financing, too, has been streamlined. FHA insurance for mortgages has made the financing of new

homes cheaper than ever before.

Today, thanks to the FHA, it is possible to borrow as much as 90%, at a rate of interest as low as 4½%. By monthly payments under the FHA plan, call them installments if you prefer the word, it is now possible to buy the home you want for as little as \$1.00 a day.

If you can afford the 10% down payment and are abreast of your obligations,

you are eligible for an FHA insured mortgage, the monthly payment or amortization of which would in all probabilities be less than what you are now paying in rent. See the table on the next page.

Now let's assume that you have found out that the home of your dreams, fully equipped and ready to live in, costs slightly more than you apparently can afford at your present rate of living. Let's see what you lack!

WHAT \$7.62 WILL DO

Suppose it is automatic heating, costing say \$300 more than you had figured. You want wall and roof insulation that will run another \$200. You want built-in cupboards, a convenient breakfast nook, and smartly designed, matched bathroom equipment, with glazed-in shower stall. All in all, let's say that your future home, built as you want it, will cost \$1,100 more than you apparently can afford at your present rent.

How can you get these extra comforts on your present income? The answer lies in the installment payment system. You can get the extra \$1,100 by paying \$7.62 more each month.

Where will this amount come from?

Take it out of the luxury items in your family budget! Smoke fewer cigarettes each week. Cut out one movie a week. Drive the family car 50 miles less.

These easy savings (substitute your own list, if you want) can amount easily to \$1.76 a week. Multiply by the 4½ weeks in a month and, lo! the \$7.62 that will bring the automatic heat, the insulation and all the rest, to give you the chore proof home of your dreams.

How to get Your Home Financed

TODAY financing of new homes is easier and cheaper than ever before.

Several kinds of institutions will lend you the money you need. You can pay them back in monthly installments over a long term, each month repaying part of the principal. For example: Under former methods a \$5,000 first mortgage, periodically renewed, would cost \$6,500 in interest alone in 20 years and at the end of this period you would still owe the \$5,000. Under the present FHA insured mortgage for the same amount, you would pay out in twenty years a total of \$8,911.20 on a \$5,000 loan. But at the end of that period you would

owe nothing. The difference between the old and the new plans would save you \$2,588.80.

In case there is to be an FHA insured mortgage, the Lender calls in FHA to study and approve your plans.

Remember, the FHA or Federal Government, does not lend you money. They insure the loan, if approved by the local financing institution of your choice. There are about 11,000 approved local lending institutions—building and loan associations, savings and loan associations, industrial banks, savings banks, commercial banks, etc.

The Lender, insured, then lends you

the money you need.

Whatever the lending institution, it will want to know if your income is steady and large enough;

Your credit is good—that is, you are able to meet your obligations as they become due;

Your house meets certain minimum standards. These standards are:

The design must be architecturally attractive, readily saleable;

The construction must be sound, resisting weather and wear and tear;

The plan must be practical and livable—not inconvenient or extreme;

The equipment must be suited to the

house and the neighborhood.

Lending institutions do not like loans on new houses in rundown neighborhoods or in the path of future business or manufacturing developments.

Lending institutions recommend building in residential areas, with good transportation, near good schools and other civic centers.

Lending institutions like to see new houses located in sections where values are equal and designs harmonious. Mixing architectural styles, or locating inexpensive houses in expensive neighborhoods, always lowers values.

In appraising a house, lending institutions are guided by many factors beyond its quick resale value. These factors are largely the considerations noted above—your personal rating, the

Your present indebtedness;

The amount of your income and its relation to what you want to invest in your new property.

In general, precautions adopted by lending institutions are little more than the principles that you yourself should have in mind when thinking of financing a home.

THE FIVE COMMANDMENTS

"A family contemplating a home of its own," in the words of Morton Bodfish, Executive Vice-president of the United States Building and Loan League, "whether it is buying or is building one to order, should bear these five things in mind—arrange for orderly repayment of the money you had to borrow, don't buy a house that is more than

ings and loan associations are now using what is known as The Federal Home Building Service Plan.

This Plan is intended to solve many problems. When a home seeker enters a lending institution offering the Plan, he is guided from that time until a completed home is in his possession. He is given sound financial counsel. The designs he is shown are the work of recognized architects; the selection is good for homes costing \$7,500 or less. If no design exactly fits his desires, one can be altered for a nominal cost.

His family's requirements are studied. He is helped to select a site or, if he already has chosen the site, he is advised as to its suitability, whether it is in a sound residential neighborhood or one menaced by deteriorating influences

HOW MUCH HOUSE CAN YOU AFFORD?

House & Lot Valued at—	\$1890	\$2450	\$3115	\$3670	\$4335	\$4890	\$5560	\$6000	\$7000	\$8000	\$9250	\$10,000	\$12,000
You have cash or land worth—	190	250	315	370	435	490	560	600	800	1000	1250	1400	2400
Additional cash for recording fees, etc.—	150	150	150	150	150	150	150	150	150	150	250	250	250
You can PAY OFF this in	TWENTY-FIVE YEARS								TWENTY YEARS				
Monthly payments:													
Interest & Principal	9.45	12.23	15.57	18.35	21.68	24.46	27.80	30.02	39.25	44.31	50.64	54.44	60.77
Mortgage Insurance	.71	.91	1.16	1.36	1.61	1.82	2.07	2.23	2.55	2.88	3.29	3.53	3.95
Fire & Storm Insurance	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
Taxes*													
Total	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$

*As local taxes vary widely, in order to determine monthly payment, get an estimate of rate per year after completion of contemplated dwelling. For example, if tax rate is \$120 per year, \$10 would be monthly payment.

location of the proposed house, consistency with neighborhood character, trend of the area, efficiency of the plan, and so on.

Whether your mortgage is to be obtained from a building and loan association, a savings and loan association or from a bank that will seek FHA insurance on this loan to you, an investigation will be made to appraise the true value of your property, as it will be with the improvements for which the loan has been asked, and it is on this appraised value—not on what you propose to spend on the property—that the lending institution will lend you the money.

You will probably be investigated also from a personal viewpoint. The lending institution will want to know about your social and credit standing;

Why you want to buy or build a house;

Your ability to get and hold a job;

you can afford, understand what you are getting into, provide for the financing of those current expenses of home ownership which are common and can be anticipated, and leave a place in your arrangements for the application of any unanticipated money for the more rapid removal of the debt on the house. Under such arrangements the odds are at least ten to one in favor of your counting your home among your blessings."

Today a great many building and loan associations show "Federal" as part of their name. Federal Savings and Loan Associations are chartered by the Federal Government. These associations are local, mutual, thrift and home financing institutions which are organized and directed by responsible local businessmen. They are owned by their local investing members and are managed by Boards of Directors who are elected jointly by the votes of the associations' investors and borrowers.

In turn, a large percentage of sav-

unrecognizable to untrained eyes. With the site once chosen, he is guided in the selection of a qualified contractor and helped through the remaining details of floor plans, working drawings, specification of materials, drawing up of bids and awarding of contracts. The workmanship that goes into his home is supervised throughout. When the home is built, it is certified as a "registered home"—a certification that both strengthens investment security and resale value.

THEY WANT TO HELP

With whatever lending institution you deal, bear in mind that these people want to do everything within reason to help you to acquire a home of your own. They know it is one of life's best investments, not only in point of the money it represents, but because of the incalculable dividends it returns in the way of better living and greater happiness for you and your family.

CONSTRUCTION



THIS section of the Year Book deals with the exciting days when the home of your dreams begins to take on actual form and substance—and it is to be hoped that your dreams will have included some very practical considerations of materials and workmanship.

As in house designing great strides have been made during the past decade in perfecting sturdy, economical building materials. Many of these are trademarked products and you can be sure, in this age of scientific testing, that the products of nationally known manufacturers are every bit as good as represented.

Your choice, or your architect's choice, of materials should be written into the contract specifications—and so too should the high standards of workmanship on which you should insist. If yours is to be a wood frame house, study with care the complete picture story on the following pages.

Nowhere is it more true than in house construction that the best, including both materials and workmanship, in the long run is the cheapest.

Here is Your Picture Guide to Good Construction

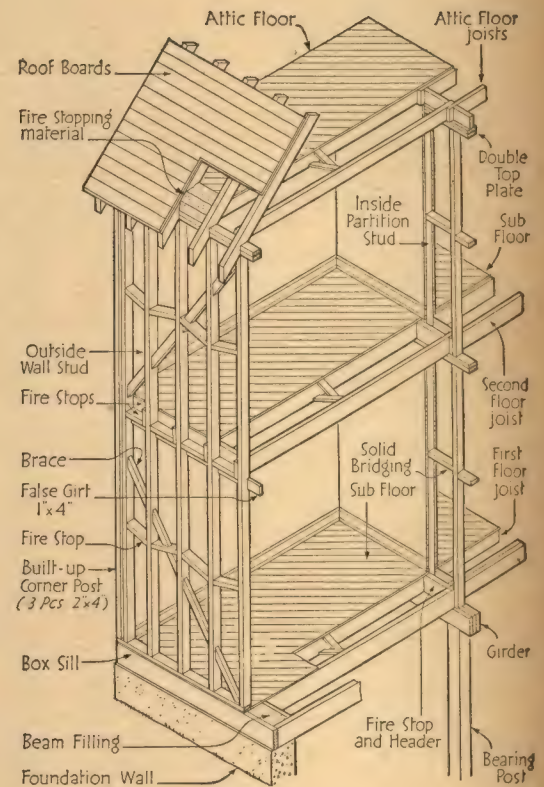
WOOD is by far the most important building material used in house construction today. Upon its proper use depends to a large extent the quality, durability, fire-safety and market value of a house.

Every prospective home owner, whether he intends to buy or build, will find it helpful to know how to distinguish good design and workmanship from poor, for only with such knowledge can he appraise the soundness of his investment. Fortunately it is not necessary to become an expert to tell the good from the bad.

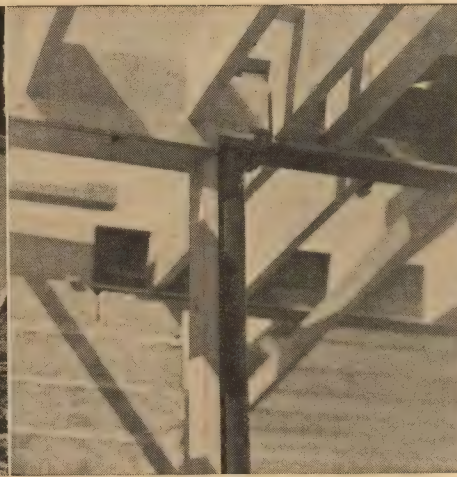
Fortunately, too, wise selection of your architect and your building material dealer is in itself assurance of good construction. The builder is particularly important. His standing in your community is based on his knowledge of adequate construction and quality materials—not low estimates. By and large, the day of the jerry-builder is past, but it's fun, just the same, to know the important requirements of good construction.

In every house there are a few "key" points that are important. If these are properly handled, it may be safely assumed that the quality of the rest of the contractor's work is equally sound. These "key" points are described and illustrated below.

Here are the hidden values in good construction that you obtain when the work is handled by a reputable builder. Every item is important!



Roman Siemianowski



Weyerhaeuser Sales Co.



Roman Siemianowski

1. FOOTINGS are the solid concrete base on which the walls of the foundation rest. They should be at least 8" wider than the wall, and 8" or more deep—wider and deeper if the soil is soft. Footings should always be flat bottomed, so as to offer even support for the wall itself.

2. BASEMENT WALLS AND THE GIRDER support the partitions and the center of the house. Basement walls should be 8" thick at least, preferably more, and should be waterproofed on the outside. Girders must be supported by solid posts, set on thick footings of their own.

3. THE SILL, or wood base of the frame, should be firmly bolted to the basement wall with bolts set deeply into the wall masonry. Between the sill and the masonry wall, a termite shield of rust-resistant metal should be placed.



Weyerhaeuser Sales Co.

4. FIRST FLOOR JOISTS should measure no less than 2" by 8", and should be no more than 16" apart. They should run only from one wall to the girder, and where the two sets from opposite walls meet on the girder, they should overlap.



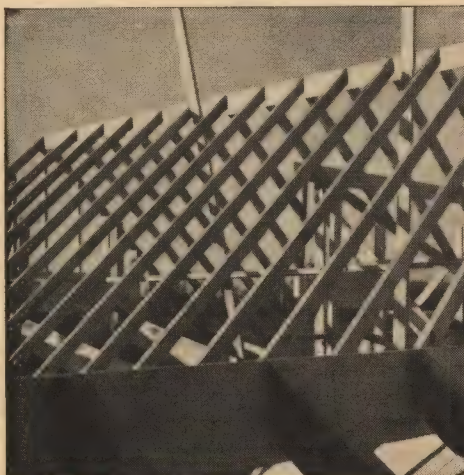
Weyerhaeuser Sales Co.

5. SUBFLOORING should always be laid on the joists before a finish floor is laid. Subflooring should be laid diagonally rather than straight across the house, since diagonal subflooring serves to add rigidity to the building.



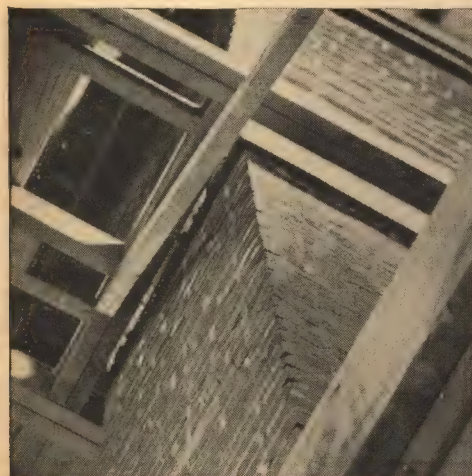
Weyerhaeuser Sales Co.

6. STUDS, which make up the skeleton of the walls of your house, should be no more than 16" apart, and should be nailed at the bottom to bottom plates. Ceiling joists should rest on double top plates or on a ribband cut into the studs.



Weyerhaeuser Sales Co.

7. RAFTERS must be firmly secured at the bottoms to double top plates on top of the stud sections, forming a firm base for the roof skeleton. At the peak of the roof, these rafters should be reinforced by a ridge board which will hold them firmly.



Weyerhaeuser Sales Co.

8. THE CHIMNEY should always be framed away from the wood parts of the house so that no wood will be in contact with it. For correct draft, a chimney should always be at least two feet higher than the peak of the roof.



Weyerhaeuser Sales Co.

9. WALL SHEATHING, which is the first layer of "skin," covering the frame of the house, should be made of sound boards without knot-holes, and should be nailed on diagonally. Diagonal sheathing adds greatly to the strength of the walls.

THESE *Hidden* Materials MUST SHOULDER THE RESPONSIBILITY OF KEEPING YOUR HOME *Robust* AND *Sound!*



●This photograph hardly appeals to the romantic emotions of one who is considering the building of his own new home. Your first impulse is to skip quickly over this phase of the building and hurry on to the more aesthetic features of charm and beauty.

●Tomorrow this uninviting scene will be transformed. Tomorrow will find here a home of beauty—the realization of someone's ideal. And because this owner tempered his zeal with practical building logic, his home of beauty will remain strong and sturdy throughout the years.

●The unseen parts of the house are the elements that establish its true value. If you are planning a home, you should study the book called "High Cost of Cheap Construction." It shows you the "right" and "wrong" ways to build. It helps you to avoid costly blunders. There is no charge for this highly informative book. Write for it.

4 WEYERHAEUSER SQUARE
WEYERHAEUSER SALES CO.
First National Bank Building
ST. PAUL, MINNESOTA

Kolorites

GIVE US TRADITIONAL
CORRECTNESS
COMFORT AND
ENDURING BEAUTY



The trend is toward traditional shingled homes of character, all designed and built to endure. Edham Kolorite Processed Red Cedar Shingles provide distinctive exterior beauty—with Architectural Correctness. Pleasing color combinations and contrasts are easily achieved, giving rich tone blends to accentuate the warmth of correct design. Good taste is assured in quiet, dignified simplicity or rugged characteristic detail.

ADDED INSULATION, TOO AT NO EXTRA COST

For new construction or reconditioning old homes KOLORITES add a warm blanket of natural insulation. Save on fuel and add comfort and charm to your home.

- Rich Beauty—in Color
- True Economy
- Durability
- Traditional Correctness
- Efficient Insulation

at a single cost

KOLORITES are manufactured by the exclusive Weyerhaeuser Process.

Learn more about this finished sidewall and roof product.—Write for Details.

Stained Shingle Division
WEYERHAEUSER SALES CO.
2563 Franklin Avenue
ST. PAUL, MINNESOTA

KOLORITE

PROCESSED RED CEDAR SHINGLES



Weyerhaeuser Sales Co.

Roman Siemianowski

10. EXTERIOR WALL FINISH, the outside covering of the house, is applied after the window and door frames have been set. Exterior finishes include wood siding, as here, or perhaps shingles, or brick veneer (a single layer of brick over wood sheathing) or stucco.

11. SOLID ROOF SHEATHING is required in all cases where composition shingles are used for the roof. When wood shingles are called for, shingle lath may be used—narrow strips of wood spaced about two inches apart instead of being laid solid.



Roman Siemianowski

12. FLASHINGS, GUTTERS AND DOWN-SPOUTS, made out of strips of rust-resistant metal, should be nailed over all parts of the roof where leakage might occur—as where the chimney comes through the roof, along the valley caused by a gable in the roof; around dormers, etc.

13. ROOFING SHINGLES, whether of wood or of composition, should always be laid so that they overlap several inches, thus protecting the roof from possible leakage. Composition shingles should be laid over a layer of strong waterproof paper, nailed to the sheathing.

14. ROUGH PLUMBING should be installed by experts only, with all horizontal drain pipes slanted slightly away from the fixtures, and each joint in a drain pipe first caulked with oakum, and then filled with melted lead to make an odorproof and leakproof joint.



Roman Siemianowski

Roman Siemianowski

Weyerhaeuser Sales Co.

15. ELECTRICAL WIRING should never be placed in notches in joists or studs, nor should plumbing pipes. The photo shows the *wrong* way of running electrical conduit. Pipes and cables should be strung through holes bored through the center of the joists, since such holes do not weaken them.

16. HEATING DUCTS for warm air systems must always be led so that they will not protrude too much into the cellar headroom, but at the same time they must never run *through* the joists. Rather, they must go around them when it is necessary to cross over joist areas.

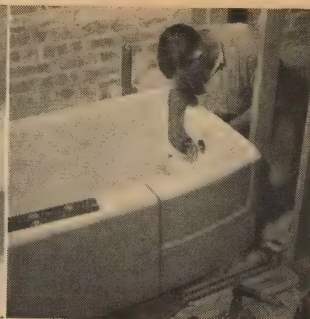
17. INSULATION, discussed more fully in the article on Page 41, is required for heating and cooling efficiency in modern homes. The photograph shows a type of wool-like insulation being applied between the studs and in the ceiling of a house. Full insulator requires storm sash and weather stripping.



Weyerhaeuser Sales Co.



Roman Siemianowski



Roman Siemianowski

18. LATH is the general name for the base for a plaster wall.

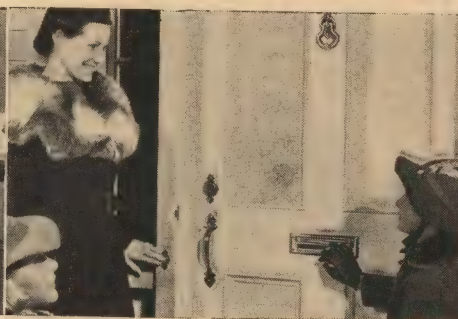
Lath may be of wood, gypsum board or fibre insulation board, as here, metal wire or of a structural insulation which both laths and insulates. Instead of lath and plaster, many people specify dry wall construction such as plywood, finish wall-board or other finish requiring no plaster coating.

19. PLASTER is a popular method of interior wall finishing. It should consist of at least two, and preferably three, coats—scratch, brown, and white.

20. PLUMBING FIXTURES must be installed correctly—or trouble will ensue. Here a bathtub is being put in wrong—the wood strips at the back, to which it is anchored, should be spaced only 16" apart, and should run the height of the wall. Otherwise the tub may later pull away from the wall.



Roman Siemianowski



P. and F. Corbin Co.

21. INTERIOR TRIM, the wood finish for cabinets, stairs, doors, baseboards and the like, should be made out of well-seasoned wood. Nails should be countersunk: that is, their heads should be driven slightly below the surface and puttied before the paint, stain and varnish or enamel is applied.

22. THE DOOR HARDWARE should be installed only by trained men. Installation of hardware is one of the most important operations in carpentry. Exceptional care must be taken not to split the wood or the door in gouging out the space in which the lock mechanism will go.



Weyerhaeuser Sales Co.

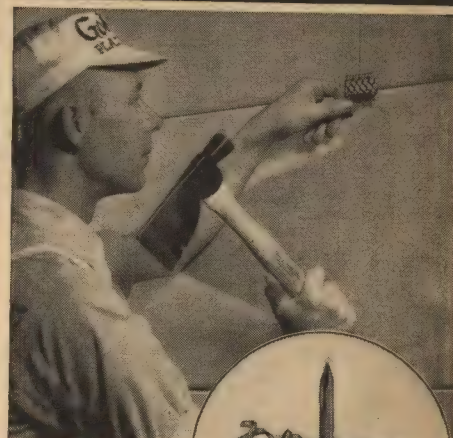


Roman Siemianowski

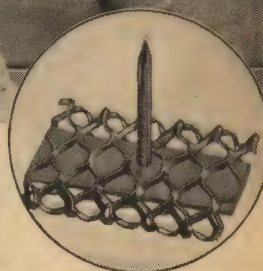
23. PAINT, both exterior and interior, should be applied in at least two, and preferably three, coats, each one allowed to dry well before the next is applied. It is false economy to try to save money by buying cheap paints.

24. FLOOR FINISH, the final step in building a house, should be done by experts. Floors should be laid with nails driven at an angle into edges of the flooring so they will not show; the wood should always be scraped or sanded, as in the photo, removing surface unevenness.

FOR YOUR NEW HOME



Gold Bond Floating Wall Nail, right, is driven between panels of gypsum lath giving resiliency to the walls plus greater strength.



DEMAND THE TRIPLE FEATURES OF A GOLD BOND FLOATING WALL SYSTEM!

1. Extra Crack Resistance.
2. One-Hour Fire Protection.
3. Reduction of Noise Transmission through Walls.

HERE is the amazing system that has completely revolutionized modern wall construction! Now, for little more than the cost of old-fashioned lathing systems, it offers resistance to cracks, one-hour fire protection, and the reduction of noise transmission.

The system centers about the Gold Bond Floating Wall Nail, with head encased in felt and metal. This nail, driven between panels of Gold Bond gypsum lath, provides an elastic wall, free from direct attachment to framing members. Thus vibrations do not reach the plaster.

Made from fireproof gypsum lath and plaster, the Floating Wall has a one-hour fire rating. Nearly twice that of ordinary walls! Finally, Gold Bond's Floating Wall resists noise transmission. National Bureau of Standards' tests give it a sound transmission loss of 47.6 decibels—enough to stop the passage of ordinary conversation from one room to another.

You'll be surprised at the low cost of a Gold Bond Floating Wall system for your new home. See your Gold Bond lumber or building material dealer today, or write direct for booklet "The Inside Story of the Floating Wall."

NATIONAL GYPSUM CO.
BUFFALO, N. Y.

How Will

THE photographs on these pages give eloquent testimony to the wide range of sidewall and roofing materials now offered by the American building industry. Mr. and Mrs. Prospective Home Builder today have at their command an unprecedented choice of materials, styles and colors.

Time was, not long ago, when the home builder was restricted in the matter of roof and sidewalls to materials locally available. This accounted for the development of certain architectural styles peculiar to specific localities. For example, there was a wide use of stucco in simulation of adobe in the Southwest and West, of brick in certain areas where clay products were readily accessible and likewise various types of wood construction in districts where lumber was in plentiful supply.

A WIDE CHOICE TODAY

Today the home builder can give full sway to his individual preferences as to materials and colors. He has his choice among the almost innumerable products of the research laboratories of an industry that today is united in a determination to give him more than ever before for his building dollar.

Exteriors



American Brass Co.

1. The always popular wood clapboard side wall is available either in straight beveled siding or in novelty patterns of various cross sections.



Harbor Plywood Corp.

2. Plywood, coming in large panels, is becoming increasingly popular because of ease of application and the many modern treatments possible.



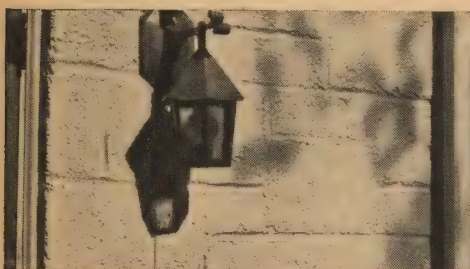
Weyerhaeuser Sales Co.

3. Combinations of materials yield interesting results. Here is illustrated a first floor construction of stone masonry topped by hand-split shakes.



Johns-Manville

4. Asbestos cement siding, available in many patterns including the wood shingle effect above shown, is fire resistant and never needs painting.



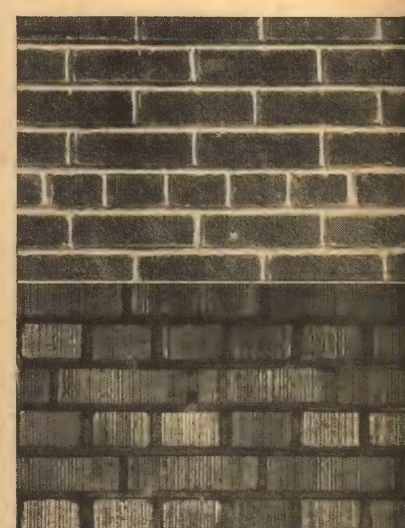
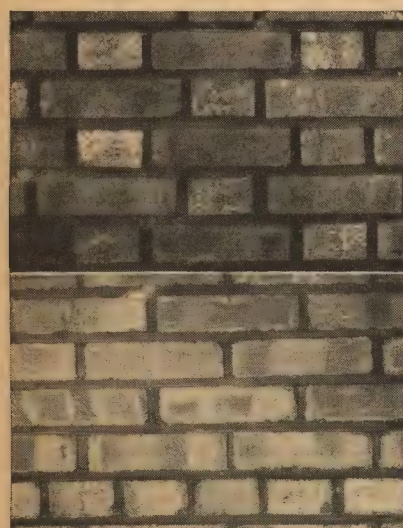
Portland Cement Ass'n

5. Solid masonry construction is possible at comparatively low cost through the use of cinder concrete blocks shown here in uncoarsed ashlar.



Portland Cement Ass'n

6. Portland cement stucco is ideal for house of Spanish or Mediterranean style. It lends itself to various textures and colors.



7, 8, 9, 10, and 11.

Brick is a universal material used in all countries in all periods. In addition to strength and durability, brick and tile are material of intrinsic beauty affording a wide variety of warm colors and interesting textures. Four popular "bonds" are (reading from upper left to lower right) the Flemish bond with raked or recessed mortar, common bond with flush mortar, common bond with troweled mortar in contrasting color, English bond with raked joints, in this case showing novelty ribbed face brick.

You Dress Your Home?

Yet it is not a difficult task to choose wisely among the vast number of new materials, as well as traditional ones, available at reasonable prices for the home that you contemplate building.

Let's take the matter of sidewalls! There are three basic choices. First, you can have a wood frame house, with wood clapboards, shingles or sidings. You may desire a house of solid masonry construction, that is, brick, hollow-type concrete blocks, hollow tile, or stone. The third possibility is a combination of the wood frame house with a veneer—for instance of brick or stucco.

BUY SEASONED LUMBER

Let's take these in order! If you have elected to build a frame house with wood sidewalls you have a choice among various styles of shingles or clapboards. The clapboards will vary from a narrow to a foot wide siding, either plain beveled or in a number of different novelty patterns. These are stock items in any up-to-date retail lumber yard. You should be sure that you are buying thoroughly seasoned lumber and preferably one of the more durable woods.

If you have decided that yours is to be all-masonry construction then your first consideration is the cost and your preference of the exterior appearance of the basic materials, brick, stone, concrete block or hollow tile.

The veneers of brick, stone or stucco are practical and obviously less expensive than all-masonry construction. The veneers like the all-masonry walls may of course be painted with any one

of several makes of masonry paint. So, too, a concrete or cinder block surface may be painted, left natural or finished in stucco in white or any one of a number of colors.

Just as important decoratively as your side walls, and much more important from the viewpoint of year-to-year maintenance, is the roof.

It must protect everything under it, not alone the house itself but also all the decorations and furnishings. How often a leaky roof permits damage to interior walls and ceilings far beyond the cost of the proper flashings, for example, that should have been specified when the house was planned.

To aid you in discussing the subject with your builder or architect the four standard types of roofs are described briefly below:

GABLE ROOF—Simple and most popular of all, the gable roof consists of two planes or slopes which meet at what builders call the "ridge." It is adaptable to practically any style of architecture.

GAMBREL ROOF—This is a variation of the gable roof with each side consisting of two slopes, steep at the bottom and gentle toward the ridge. It dates back to Colonial times, when it was designed to create additional headroom upstairs.

HIP ROOF—From the sides and ends of the house four slopes rise to the



Certain-teed

1. Asphalt shingles are widely used today because they offer the home owner low first cost, fire resistance, a wide choice of patterns, and, in step with the modern mode, a fascinating selection of colors and color combinations.



Durable Wood Institute

2. Wood shingles, the traditional roof covering for American homes, are available both in the conventional machine manufactured type or at some increase in cost in the hand-split wood shake (pictured here in connection with a rugged type of masonry construction). Wood shingles now come in a wide variety of prestained colors ready to apply. The well known "Certigrade" Red Cedar Shingles, standardized in quality and grade, are now available in all parts of the country.

Roofs



Rising & Nelson Slate Co.



Copper and Brass Research Ass'n.



Johns-Manville

3. Two other types of roofing materials are available to the home owner who is not restricted in his building budget—slate pictured above, and burned clay tile. Both of these materials are usually associated with the more elaborate homes.

4. Metal roofing, like the sheet copper roof shown above, with standing seams carefully spaced down the slope of the roof, is today available in light weight (10 oz.), and consequently at prices which have lead to its increasing use on small homes.

5. Asbestos cement shingles are usually laid on a foundation of asphalt saturated felt, increasing the waterproofing qualities of the roof. They come in various colors and patterns, making possible many charming effects.

Before it's even finished.

Will Your New Home Bear This Stamp...



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Celotex Triple Sealed Asphalt Shingles seal the top of your house against the elements. And 1-inch **Celotex Vapor-seal Lath** in top-floor ceilings seal it against excess summer heat, winter fuel waste and vapor condensation.

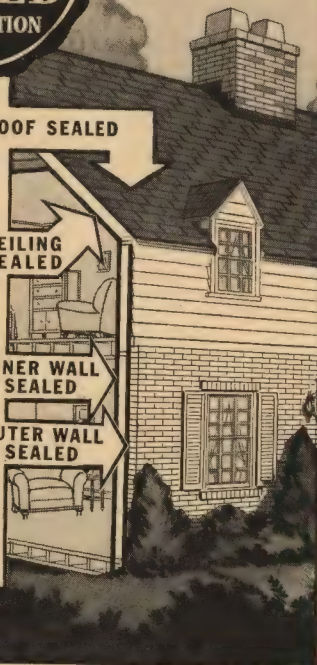
Celotex Vapor-seal Sheathing outside the framework and **Vapor-seal Lath** inside, with "breathing space" between, give strong, wind-tight, fuel-saving sidewalls, correctly vapor-sealed... providing guaranteed protection at low cost!

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For little or nothing extra, you can make your home worth more—better to live in—cheaper to heat—by using

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Your Celotex dealer will gladly explain how Celotex Safety Sealed Construction seals your home against wind, rain, sun rays and burning embers—seals it against excess summer heat and winter fuel waste—and vapor-seals it for better humidity conditions in winter without harmful condensation in the walls.

He recommends this improved, money-saving construction because he knows you'll build better for less money the Safety Sealed way.

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Visit your Celotex dealer today. He'll give you the new Celotex Check Chart that helps you avoid obsolete construction—answer any questions on building—and if you wish, will tell you how to select a good architect, contractor and finance agency. See him at once—or use the coupon.

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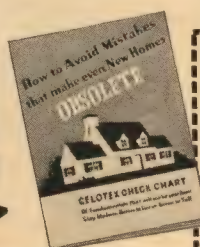
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ridge to make the hip roof, creating a pyramidal effect.

MODERN ROOF—The perfection of modern roofing materials has made possible the flat roof of the so called "modern" house, with its uncompromising rectangular lines and maximum utilization of interior space.

Different styles of architecture naturally demand different types of roofing. The appropriateness of the material, its color, pattern and texture are all points to which you should give consideration. If your budget is not limited you may choose to use one of the more expensive types of slate or burned clay tile.

To aid you in your choice we are giving some of the general characteristics of the basic types of roofing from which you can make your choice.

SHINGLES: There are only three basic types from which to select, wooden shingles, asbestos shingles and asphalt shingles.

WOODEN SHINGLES: A large number of homes have roofs and sidewalls of western red cedar, cypress or redwood shingles. These shingles lend themselves to many variations of artistic design.

Where color is required on a roof, pre-stained western red cedar shingles are recommended, or unstained shingles may be applied to roofs and sidewalls and stained after application. Only the best type of shingle stain will



Certain-teed

6. Besides a wide variety of patterns and sizes, asphalt shingles today offer an almost unlimited variety of color combinations. There are more than 24 colors and color blends now available to the prospective home builder.

give satisfactory results, and only hot-dipped, zinc coated or copper nails should be used in the application of a roof.

WESTERN RED CEDAR HAND RIVED SHAKES: Rough hewn shakes

have figured prominently in the development of American architecture from pioneer days, when they were adapted through necessity until today, when they are recognized as one of the most individual of exterior coverings.

These shakes are sawn diagonally and their tapered tips permit their being closely woven into a thick protective house covering. They may be used unstained or in a wide range of colors, also in special shapes designed to meet individual specifications.

ASPHALT ROLL ROOFINGS: Asphalt roofings are sold in the form of rolls that may be applied in strips, in a form resembling shingles or in hexagonal sections. The base is saturated with asphalt and surfaced with mineral granules in a variety of colors.

Note the pictures with this article of asbestos cement shingles and copper sheet metal roofing. Both have the advantage of being fire-resistant and never requiring attention. They are higher in first cost, but enjoy the advantage of little or no maintenance cost and they will last the life of the house.

ASPHALT SHINGLES: They were developed in this country and represent one of the most popular types of roofing for the small home. The first new development in asphalt shingles was the modern strip shingle which had the advantage of saving one-half the time required to apply. Next was developed a wide variation of colors, accomplished by coating the mineral granules on the surface of the shingle. More recently the thick butt asphalt shingle has been introduced, with the advantage of longer life and more interesting shadow lines on the roof.

Asphalt shingles, just as in the case of asbestos and other types, offer the home builder the advantage of selection of methods of laying. The most popular is the American method—consisting of laying square butt shingles side by side, each row overlapping the row below it. In the Dutch Lap the shingles overlap not only the row below but the shingle to the right. There is also the French method involving the use of hexagonal and octagonal shingles.

It is no wonder that the "dress" of the modern inexpensive small home is characterized by the freshness and individuality that previously could be achieved only in the most costly residences.



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Through WINDOWS You Look Upon the WORLD

THE windows in your home can be made to exert a decided influence on its style and character. Their size, shape and location should be carefully studied. Tall, narrow windows give the effect of height; broad, low windows will make your house look wider.

In placing your windows, both exterior and interior appearance, as well as practicality of arrangement, indoors and out, should be carefully studied. It is advisable to group your windows, because single windows are often hard to space nicely.

After arranging your windows to the best all-around advantage, you will do well to insist that they be glazed with window glass of high quality. Its sparkle and brilliance will add liveliness and warmth, create an atmosphere of friendly hospitality.

The selection of the right type of window for your home should depend on its architecture and your personal preference. Casement windows have much to recommend them as they may be opened so that the extending window acts as a deflecting ventilator, as well as giving 100 per cent opening.

Properly fitted windows are important in a new house. Rattling windows are usually due to careless fitting of the window stops (the narrow strips which hold the sash in place). Windows may bind a little, if they are in place while the plastering is being done until the house dries out, or the woodwork has time to adjust itself to atmospheric conditions in the completed house.

Window openings call (according to climatic conditions) for screens for which copper (bronze) or aluminum standard cloth is preferred. Weatherstripping, double-glazing, or storm sash are also desirable in most sections of the country. Today windows are available ready made with all of these features included.

WINDOWS BY *Andersen*

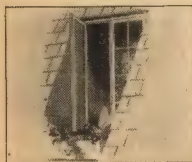


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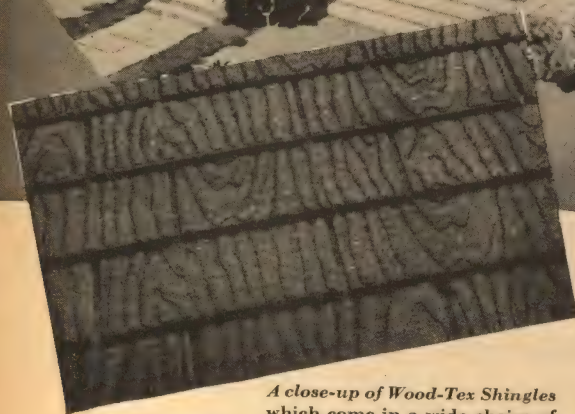
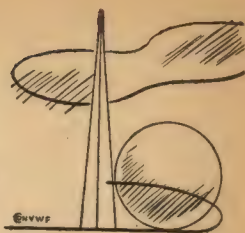
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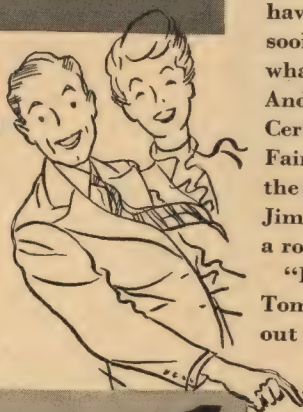
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"Our good luck started at the New York World's Fair. Jim and I enjoyed every minute.

"At the 'Town of Tomorrow', the Number One House was *our* number one choice. We both liked the roof—but for different reasons.

I'm not an engineer...but Jim is!

"What appealed to me about those Certain-teed Wood-TeX Shingles was the really stunning effect they made. Their colors were blended so beautifully and the texture added so much.

"Jim praised their fire-resisting properties and the way the graining was built up on the shingle to give it extra weight and extra wind-resistance. I wouldn't know about those things, but Jim does.



There it was... the same shingle

"I didn't dream then that we would have our 'Home of Tomorrow' so soon. But when Jim and I learned what it *cost*, we saw no need to wait. And there in the plans was the same Certain-teed shingle we saw at the Fair. I'm glad—because we picked the green blend that was my favorite. Jim is glad because, as he says—it's a roof we'll stay proud of!

"If you're interested in a 'Roof of Tomorrow', we both suggest you fill out and mail in the coupon."

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Insulation

**COSTS
NOTHING**



INSULATION, in all its various forms, is the one element in a building that actually costs nothing! It is more expensive to live in a house that has no insulation than to own an otherwise identical house that is properly insulated.

People often think of house insulation rather narrowly, as meaning the addition of something in the attic or roof to reduce the escape of warmth in winter and to keep out heat in summer. Actually insulation means much more, for it includes storm sash or double glass of some sort in all doors and windows, weatherstripping of these openings to lessen air leakage, awnings for cooler windows in summer and the use of building insulation in all exposed parts of the house, including walls, floors over unheated spaces and an unheated attic or the roof.

In new house construction, where the heating plant can be selected after the insulation methods are decided upon, it is found that enough money can be saved, by using a smaller heating plant, to more than pay for the work that made a smaller plant possible.

And these immediate cash returns are not all! They do not show the greater summer comfort insulation will pro-

vide. They do not reflect the actual cash savings which both insulation and awnings will bring to owners who operate summer cooling equipment. They overlook the better health that follows comfort and freedom from drafts and chills.

SAVINGS COVER THE COST

Under the provisions of the National Housing Act all these advantages can be had for existing houses without any actual expense to the owner. A modernization loan under Title I, requires no down payment, and can be paid off in five years or less out of the fuel savings resulting from installing storm windows and insulation.

Any architect or qualified air conditioning or insulation contractor can figure out the actual cost and direct savings of each form of insulation you might use in your house. Then, if you do not want to borrow or cannot make this profitable investment all at once, you can determine what steps to take first.

Winter windows, or double glass of any practical form, stop about 50% of the heat loss through glass in winter. They cost surprisingly little, but it is well to specify a good quality clear

1. The rigid large panel type of insulation board is economical, saves labor, and serves both as wall sheathing and insulating medium.

2. The fibrous types such as rock or glass wool are used to fill the space between inner and outer walls, in second floor ceilings, under the roof.

3. A most satisfactory way of stopping heat loss by either conduction or convection is this type of wool insulation that comes in long blankets.

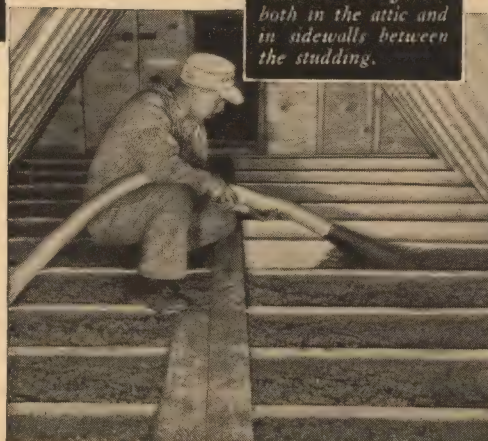
4. The rigid type of insulation board serves as vapor barrier, as insulation and as lath for plaster walls and ceilings.

Photos courtesy
1. Celotex Corp.
2. Alexander Houses, Inc.
3. Wood Conversion Co.

5. For houses already built this "blown in" type of rock wool insulation is efficient both in the attic and in sidewalls between the studding.

Photos courtesy
4. Celotex Corp.
5. Eagle Picher Sales Co.
6. Gimco Rock Wool

6. Rock wool bats of wall thickness are another recent development of research engineers that bring comfort the year 'round for the small home owner.



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In your present home, stop "heat leakage" and insure greater comfort by insulating the attic with Balsam-Wool. The job is amazingly quick and inexpensive—and a Money-back Guarantee assures complete satisfaction. Remember, Balsam-Wool now costs 50% less to apply! Mail the coupon for full information.



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glass so that vision will not be impaired. Double glazing (two barriers of glass) also reduces fogging and condensation on windows so effectively that they are practically indispensable in any house that is to have winter air conditioning and healthful humidification.

Weatherstripping, if of good quality, will stop 75 to 90% of the air leakage around windows and doors. Low grade materials are hardly worth bothering with, for the slight difference in cost between the best and the cheapest may mean a wide difference in efficiency.

There are four basically different kinds of insulation from which to choose: rigid fiber boards, flexible blankets, "fill" insulations of mineral wool fibers or porous mineral granules, and reflective metal insulations. All four types are effective, durable and eminently satisfactory when properly used and correctly installed.

All of them produce the desired result of checking heat movement, summer and winter, though they may work by different methods. Each type has its own advantages and limitations; no one type is superior to all others under all circumstances.

CURES FOR CONDENSATION

There has been much misinformation in circulation about moisture in insulated walls and roofs. All forms of insulation may contribute to the formation of frost or dampness in the insulated spaces if water vapor is allowed to reach them from the inside, or is not given a free escape to the colder outside air. Recent scientific research has laid this dampness bug-a-boo to rest forever, for it has been established that either of two methods will prevent hidden condensation in new, or cure it in existing buildings.

One method is to use a "vapor-barrier" between the insulation and the warm interior where all the moisture originates. This barrier may be part of the insulation itself or may be a covering of a paper or other material through which vapor will not pass.

The other is to allow the walls or roof to "breathe" to the cold outside air so that any moisture or vapor coming from the warm inside air can continue its natural outward movement.

The story of insulation is not quite complete unless summer conditions are considered. About one-quarter of the heat that enters a house in summer comes in through windows exposed to direct sunlight. Practically all of this heat "gain" can be stopped by awnings or outside shade. The remaining three-quarters of the outside heat comes in through the roof and the side walls.



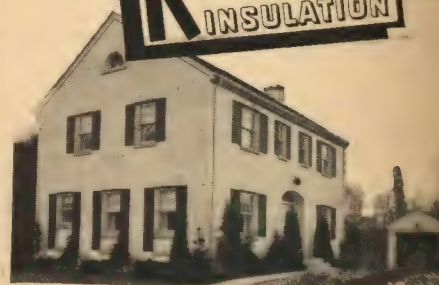
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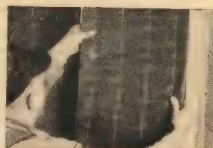
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Behind the Scenes with the PLUMBER

THERE is more to the plumbing than just the fixtures. In the walls, under the floors, and in the ceiling of your house will be from 300 to 400 feet of supply and waste piping for your plumbing system and in addition there will be important valves and fittings.

While the plumbing fixtures are more glamorous than the piping, they cannot give satisfactory service unless the supply and waste piping is well designed, adequate, and correctly installed.

The time to plan for the concealed part of your plumbing system is when you are planning the house. You will save money and have a more efficient



In the view above a bath tub goes into place.

plumbing system if you will talk things over with a good plumbing contractor before the plans for your house proceed to the blueprint stage.

HERE ARE THE ESSENTIALS

Just to show how wise it is to plan your plumbing in advance, here are some of the essential points which should be taken into consideration:

1. Water requirements. These are determined by the number of plumbing fixtures, lawn faucets, garage faucets, and other places where water may be used.

2. This decided, the plumbing contractor will be in a position to advise you on the size of the service line which brings the water from the street to your meter and the diameter of the branch supply lines which lead from the meter to the bathroom, kitchen, utility room, etc.

3. Location of pipe lines. With the modern trend toward use of the basement for recreation purposes, it is desirable to give some thought in advance to the location of piping in the basement.

4. Pressure. If the prevailing water pressure in your locality is high, it will be necessary to use a pressure reducing valve.

5. Equalization of pressure. There should not be too many fixtures on one

branch line because this cuts down the volume and pressure. Lawn faucets should not be on the same line with plumbing fixtures. They should be on a separate line direct from the meter.

6. Piping should run as straight as possible. Every bend introduces some frictional resistance. Waste lines should never make sharp bends.

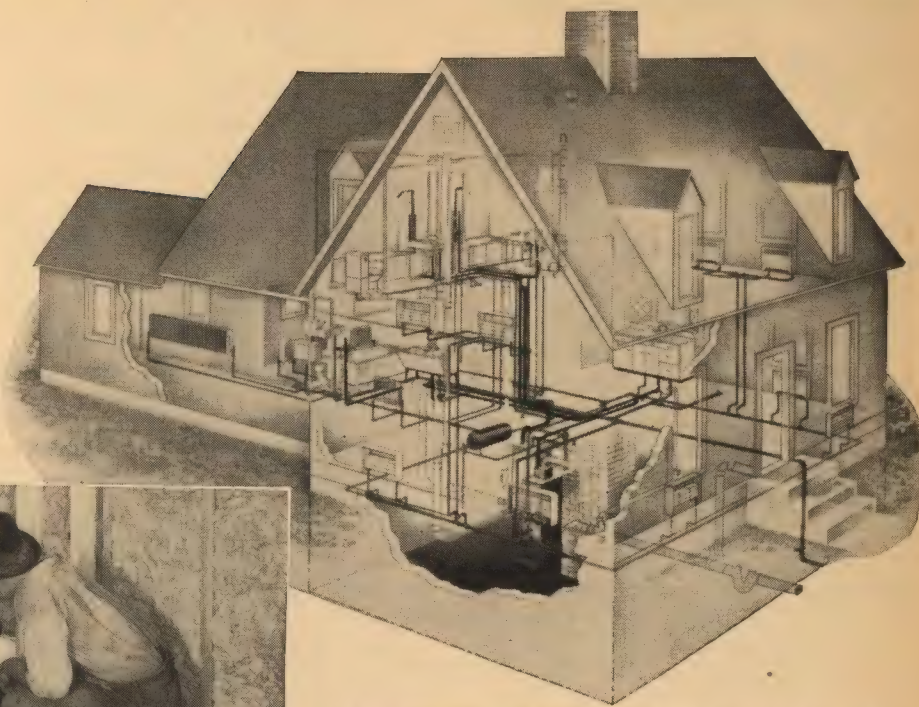
7. Shut-off valves. All branch lines running to groups of fixtures should be equipped with separate shut-off valves for the hot and cold water.

8. And speaking of repairs—repairs to the concealed part of your plumbing system can be made only at considerable expense and inconvenience. When you are planning your house is the time to plan a system that will be as free from repairs as your plumber can make it. Your best assurance of quality is the use of nationally-known plumbing materials.

BEWARE OF ORPHANS

9. Beware of orphans. Your plumbing system should be made up of standard, interchangeable parts such as those made by manufacturers whose names are nationally-known.

10. Safety. Quality and dependability in materials and workmanship is your best assurance against a breakdown of the piping with its attendant possibility of damage to furnishings.



At top, transparent scale model of house Number Fifteen in the Town of Tomorrow at the New York World's Fair, showing complete plumbing-heating installation, as exhibited in the Crane Co. display at the Fair. In all 15 houses in the Town of Tomorrow careful consideration was given to hidden piping as well as fixtures.



Insulation of hot water pipes prevents heat losses —of cold water pipes prevents condensation.

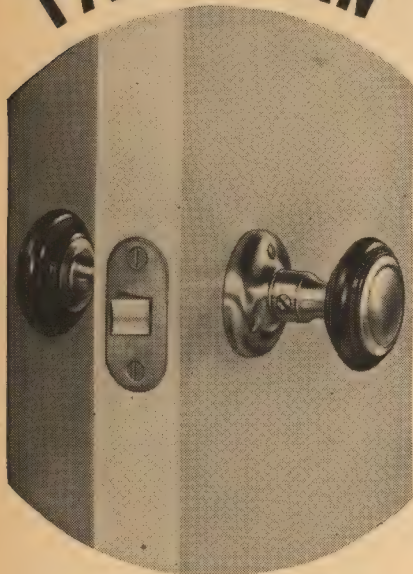
Good workmanship always pays.

There thus are many reasons why you should take the time to discuss the plumbing for your new house with an experienced plumbing contractor.

He will be glad to go over the entire plumbing system with you—with no obligation on your part. Every good plumbing contractor wants you to have a plumbing system that will give you quiet, efficient, trouble-free performance for many years.

LOCKWOOD

PATRICIAN



BOR-IN

HARDWARE

for the

"Home of tomorrow"

THIS beautiful hardware adds its distinctive charm and modern, efficient operation to the No. 1 home in the New York World's Fair's "Town of Tomorrow." Lockwood Patrician knobs are available in colors to harmonize with color schemes in kitchen, bath and bedrooms, and in black or ivory for the living portions of the home.

Combined with the practical, economical Lockwood Bor-in latch, this is truly the hardware for tomorrow's homes — a handsome cost-saver.

Lockwood Patrician Bor-in hardware is included in all genuine specifications for reproduction of the "World's Fair's" No. 1 home, as licensed from the original plans by the National Home Builders Bureau, Inc.

LOCKWOOD

HARDWARE MFG. CO.

Division of

Independent Lock Co., Fitchburg, Mass.

Door Knobs Join the Color Parade

LIKE many of the other features of design and equipment of the Number One House at the New York World's Fair, the hardware selected for this charming, efficient small home is in keeping with its purpose and spirit.

For interior doors advantage has been taken of the most modern developments in hardware to add a touch of harmonious color while maintaining a high standard of functional efficiency at an actual saving in cost. The door knobs, a combination of metal and plastics, are available in ivory or black for general use and in Chinese red, green, orchid, yellow, or delphinium blue for kitchen, bath room, bedroom, or elsewhere where definite color schemes are to be carried out.

The colored plastic inserts can be easily and inexpensively changed should the color scheme of the room be revised at a later date.

These knobs are used in connection with a new type of latch which contributes a saving in cost of installation that makes it less costly than ordinary locks. The latch itself is tubular in shape and is installed in a single hole bored in the edge of the door. This saves the considerable time consumed in mortising for locks of conventional type.

At the entrance doors the semi-modern architectural design of the exterior definitely called for a departure from the traditional entrance door handle. An attractively designed forged brass door knob was chosen.

The Dutch door, opening on the rear court, having upper and lower halves which at times are operated independently of each other, was equipped with a type of bolt that joins the two halves firmly, or which can be retracted so that the lower half can be closed and the upper half open.

Photos from Lockwood
Hardware Mfg. Co.



The trend toward beauty in every detail of today's small homes is exemplified by skillful design of modern door hardware.

WALLS— and then WOODWORK

INDOORS the first decision to be made relates to the materials to be used on walls and ceilings. Shall it be plaster, one of the many new types of wall board, some special sound absorbent product (particularly for ceilings), plywood, or some form of plank or wood paneling?

This choice, in turn, is governed by the surface decoration desired: paint, wall paper, wall fabrics, wall linoleum, textured plaster or natural or stained wood. To a large extent these decisions influence the remaining choice of flooring and trim.

The unique advantage of plaster, which is not possessed by other finishing materials, lies in its ability to provide a smooth straight wall or ceiling over an irregular base. All other finishes, which are applied in sheets of uniform thickness, must have a true foundation of evenly aligned studs or joists, as they will reveal on the surface any irregularities beneath.

Plaster has little strength in itself; it depends upon a rigid structure and a firm, secure base. It is usually the preferred material if walls are to be papered or painted, especially if the structural walls are not perfectly true. Similar effects can be obtained with modern plaster boards applied with special reinforcing tapes that conceal the joints and leave a smooth surface.

Wall boards are available in almost endless variety. They are made of asbestos-cement for hard tile-like or marble-like finishes, of fibrous insulating materials for softer and often interestingly textured effects, and of gypsum in tile markings or plain surfaces. The latter are often used as a base for interesting textured surfaces produced with plastic paints.

In the same category falls plywood, which may be used either for natural wood finishes or as a base for paint. Plywoods veneered with rare decorative woods give an appearance of richness far greater than their cost would indicate.

All of these materials have one advantage in common; they eliminate the dampness brought into the structure by fresh plaster and save the long drying period which plaster demands. Most of them, however, require a decorative handling which uses the joints between

embracing windows, frames, doors, mouldings, cabinets, mantels, stairs and many other articles of wood which are installed in a home for its beautification and for the comfort of the occupants.

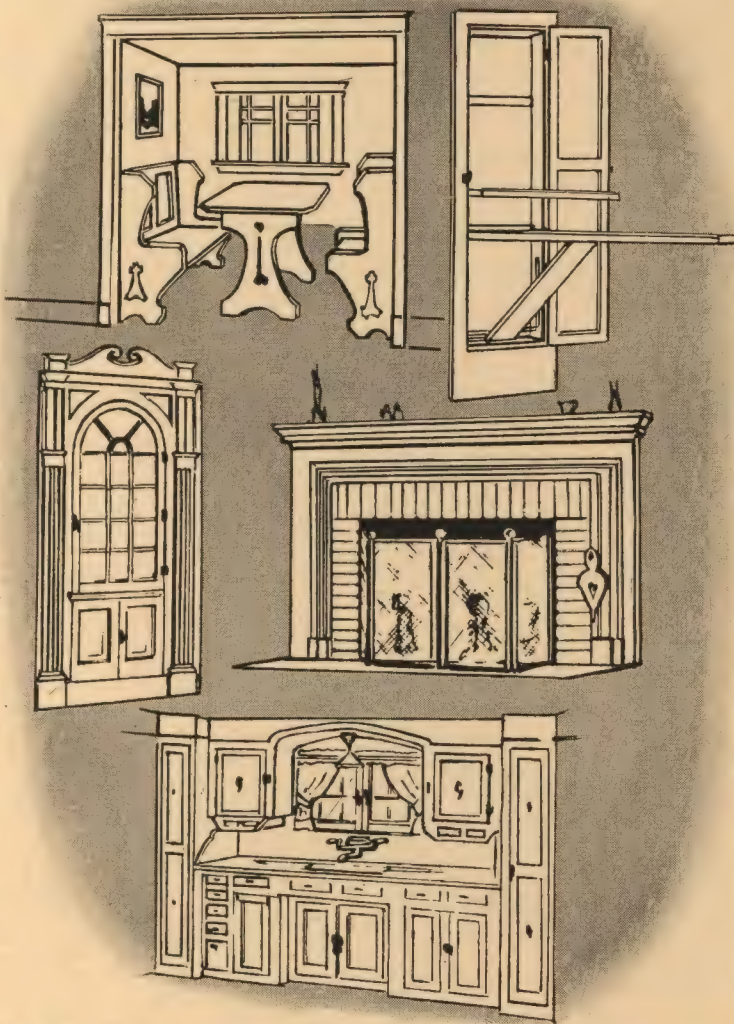
Wood windows and frames are accepted as the standard of quality upon their centuries old record of service, yet the improvements made within the last few years offer today's home builder greater durability, easier operation, absolute weather-tightness and economy of installation such as

were not available at any price 15 years ago. Home builders in every part of the country can obtain from their lumber dealers wood windows and frames which are chemically treated for immunity to fungus attack, so that durability is assured even under the most severe conditions of service.

The National Door Manufacturers Association, with the aid of the country's leading authorities on millwork preservation has established minimum standards which represent the highest quality of preservation available in commercial practice today. Products which are preservative treated in accordance with these minimum standards are identified by the official Seal of Approval of that Association.

Windows so treated are obtainable in sizes ready to slip into the frame without further fitting, or may be purchased completely installed in the frame with high quality weatherstripping and balances or weights fitted and adjusted so that the entire unit is ready for easy installation in the wall. Such windows provide true economy because of the low upkeep necessary and the substantial savings in fuel which they make possible.

Doors can make or break the beauty of a home. Selection of an appropriate, pleasing design of entrance door for the particular architectural type of the home, whether traditional or modern, can be easily made from the wide variety of styles which the retail lumber dealer offers. For the Colonial home, panel type doors are most appropriate. These are available with or without glass openings and in a variety of ar-

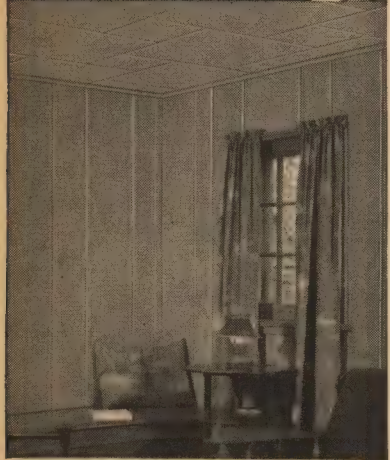


the units as a part of the design.

And now for the "trim!" Good woodwork, like all good furniture, combines beauty, utility and serviceability. The time has not long passed when only the owners of the finest residences could afford such woodwork. In more recent years the quality and beauty in woodwork which results from careful selection of materials, authentic designs, precision workmanship and skillful construction are available at reasonable cost for every home whether it be in the \$2,000 or \$200,000 class.

Woodwork is an all-inclusive term

"NOW WE HAVE
TRUE COLOR HARMONY
AND *Quiet*
with...
Nu-Wood
INTERIOR
FINISH"



Nu-Wood was specified for House No. 1 by the official architects of the Town of Tomorrow and approved by the New York WORLD'S FAIR Board of Design.

Here's a wonderful wall and ceiling that gives you beautiful, permanent decoration—restful, soothing, quiet—plus added insulation efficiency! Nu-Wood, with its rich texture, interesting patterns and soft, harmonious colors, creates rooms you'll be proud to show your friends. It fits in with any scheme of decoration—hides drab walls and ceilings. Used with the new predecorated Kolor-Trim molding, Nu-Wood provides distinctive interiors at low cost—no paint—no muss or bother.

Amazingly inexpensive for new or old rooms!

Nu-Wood is the inexpensive way to add fresh interest to old rooms—and to build new ones, too. With Nu-Wood, you can have that recreation room in attic or basement... create a lovely sun-room, den or nursery in unused space... at amazingly low cost! Let us show you what Nu-Wood will do in *your* home—mail the coupon!

NU-WOOD
THE INSULATING
INTERIOR FINISH



Nu-Wood... Products of Weyerhaeuser... Balsam-Wool

WOOD CONVERSION COMPANY

Room 12-9, First National Bank Bldg.
St. Paul, Minnesota

Gentlemen:

Please send me further information and full color illustration on Nu-Wood for ☐ New Construction ☐ Remodeling.

Name _____

Address _____

City _____ State _____

rangements of panels. Modern effects are obtainable by the use of flush or slab doors which may be grooved or plain and may be had with or without glass openings.

Interior doors are equally important and their selection should receive as much care as the choice of furniture. Doors which readily receive and hold enamel finishes, while they may be a few cents higher in first cost, will prove to be economical in the long run. The sanding and preparatory work necessary for each repainting is costly and bothersome, so good finishes should be used in the original paint job.

Who has not observed the remarkable transformation which takes place during the "trimming out" of a house? The installation of window and door trim, base mouldings and perhaps a ceiling mould, stair balustrade, kitchen cabinets, and possibly a mantel and a china cabinet immediately converts a rough, unfriendly house into an inviting hospitable home.

PRE-ASSEMBLED CABINET WORK

It is therefore apparent that too much stress cannot be laid upon the importance of careful selection and proper installation of the woodwork. As is true of windows and doors, most retail lumber dealers can provide at low cost correctly designed stock mouldings, stairs, mantels, kitchen cabinets, china cabinets, linen cabinets, telephone cabinets, ironing board cabinets, and many other articles indispensable to living comfort.

Selection of the woodwork should be made before the plans for the house are completed, or at least before construction is actually started. If the carpenter is supplied in advance with the exact sizes of all cabinets which are to be built into the wall, the necessary openings can usually be prepared without added cost. Furthermore, door openings, window openings, and built-in cabinets can then be so arranged as to preserve pleasing proportions and proper balance in all of the rooms. Your retail lumber dealer can supply all of the necessary "opening sizes" for all items of stock woodwork which you select.

Good woodwork requires no more care than good furniture. The importance of its appearance, however, to the general appearance of the home bespeaks reasonable care. Woodwork should not be applied to freshly plastered walls until they have had an opportunity to become reasonably dry. It should be painted or stained and varnished immediately after installation. These precautions involve no additional expense and will be repaid many times over in the satisfaction derived from a lifetime of service.

**HAVE BEAUTIFUL
INTERIORS... Use
pre-cut, pre-shrunk
TRIMPAK**



For your new home, *insist* upon interior trim that lends charm to your home... trim that won't shrink and cause ugly cracks! Today... there's a modern, *packaged* trim that insures permanent beauty. It's TRIMPAK!

Only the *cream of the log* goes into TRIMPAK! Pre-cut to approximate length—it's seasoned in steam dry-kilns—*pre-shrunk!* TRIMPAK comes to the job clean and bright—free from defects—ready to put up—easy to put up—saving time and labor. It takes paint or varnish perfectly, *stays* beautiful. Your choice of 16 different woods. For full facts, ask your retail lumber dealer, write the licensee nearest you, or direct to Trimpak Corp., 44 Whitehall Street, New York, N. Y.

TRIMPAK LICENSEES

Bradley Lumber Co., Warren, Ark.
Caddo River Lumber Co., Kansas City, Mo.
Cummer Cypress Co., Lacoochee, Fla.
Dierks Lumber & Coal Co., Kansas City, Mo.
Florida Louisiana Red Cypress Co., Jacksonville, Fla.
Fordyce-Crossett Sales Co., Chicago, Ill.
Frost Lumber Industries, Inc., Shreveport, La.
Long-Bell Lumber Sales Corp., Kansas City, Mo.
Putnam Lumber Co., Shamrock, Fla.
St. Croix Manufacturing Co., Bayport, Minn.
Southern Lumber Co., Warren, Ark.
Spokane Pine Products Co., Spokane, Wash.
The Sun Lumber Co., Weston, W. Va.
White Pine Sash Co., Spokane, Wash.
Wilson Cypress Co., Palatka, Fla.

TRIMPAK
the *ULTIMATE* in TRIM

Heart of the Home— the *FIRE* *PLACE*

AN open fireplace adds to the charm and friendliness of any home. The dancing flames and crackling embers act as a magnet to draw young and old into the hearth's comforting glow.

Like all other departments of home construction, the building of a fireplace has been greatly improved. No longer need your face parch as your back shivers—nor does annoying smoke prevent full enjoyment of the open fire.

One important improvement in the modern fireplace is a prefabricated metal lining around which the masonry is built. Like a warm air furnace, it draws air from floor level into a heating chamber surrounding the fireplace. Here the air is heated, and sent out to circulate evenly and healthfully to every corner of the room and even adjoining rooms.

This extra heat, previously wasted, for the most part up the chimney, can cut heating costs by saving furnace operation during cool spells of spring and fall weather. In southern homes, or summer camps and cabins, it is often the only heating equipment required.

USE ANY MANTEL DESIGN

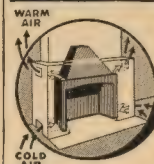
Use of this type of metal fireplace unit greatly simplifies construction. Several makes now include the firebox, damper, smoke dome and down draft shelf, all correctly designed and proportioned. It is easy for a competent mason quickly to build up the masonry. Yet there is no limit to mantel design—you can have any style fireplace you choose.

Especially interesting is the fact that these present-day fireplaces cost little more than the old-fashioned kind, due to the saving in materials and labor otherwise required. And even this is soon offset by the economy in heating costs. Little wonder that the open fireplace is again becoming one of the important features in the home today.



Photos by Heatilator Co.

At top: The fireplace in the living room of Demonstration Home Number One is of the modern type described. Three other designs are also shown.



... warms even adjoining rooms

Build a Heatilator Fireplace that actually warms the air in the room . . . that actually circulates warmed air to far corners, even to adjoining rooms. Proved in thousands of homes and camps all over America.

Selected Exclusively for the World's
Fair No. 1 Demonstration Home

Let us tell you how this new way to use fireplace heat will give extra comfort, reduce heating costs in your home, camp, or basement game room. Write—state if building a new or rebuilding an old fireplace.

WILL NOT SMOKE

The Heatilator provides a correct metal form for the masonry . . . assures perfect operation . . . puts no limit on mantel design. Firebox, damper, smoke dome and down-draft shelf are built-in parts. Saves materials, saves labor.

HEATILATOR COMPANY
785 E. Brighton Ave. Syracuse, N. Y.

HEATILATOR Fireplace

What's New in FLOORS?

ADVANCES in hardwood flooring include factory-finished strip flooring that largely eliminates scraping and finishing on the job; parquet flooring in square blocks that is decorative, durable and moderate in cost; and parquet or plank floors made of plywood that permits one to have a surface of rare or costly wood without the expense of solid boards.

The newest trend in linoleum flooring is the introduction of specially designed borders and "inset" or inlaid decorative designs to suit the shape and character of the room. Long favored for kitchens and baths, linoleum has now captured halls, living rooms and even bedrooms in a growing number of homes.



Sloane-Blabon Corp.

Above is one of the unusual decorative designs now possible with linoleum flooring.

Asphalt tile remains the one flooring that may be used on concrete floors in contact with the ground, as in basements and enclosed sun terraces. On a higher cost level rubber tile offers durable resilient surfaces in a wide

variety of colors and designs.

Cork tile is a flooring that compares favorably with the best hardwoods in cost, durability and adaptability. It has the further advantages of being non-skid and non-resonant.

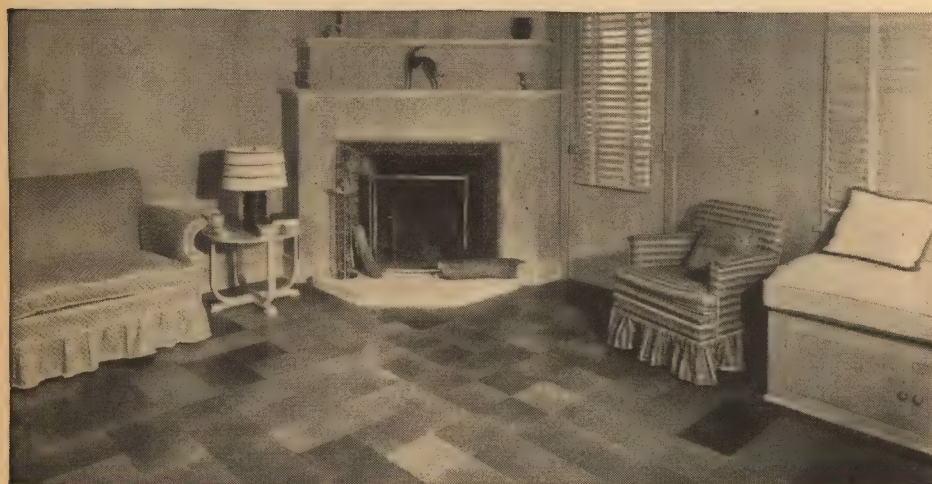
With the former no rugs are needed because the floor pattern is highly decorative; with the latter, big

rugs or small scatter-rugs can be used. Recently a permanent finish has been perfected that needs no servicing such as waxing or polishing.

In your plans for year-to-year maintenance of your house, bear in mind that floors are one item that richly reward frequent inspection and proper care.

Featured!

—in World's Fair Houses #1 & #3



HIGH DENSITY CORK FLOORING

See it in World's Fair houses numbers 1 and 3, then write us, your flooring dealer or lumber yard for particulars. Resilient, quiet, non-skid, washable, no open joints, no squeaks, easy maintenance. Notice how the rugs stay put and don't slide.

Cork flooring comes in three basic shades with many variations, so that it can be laid in attractive and intricate designs or in narrow strips, like wood.

Dept. W. F. 100

CORK INSULATION CO., Inc.

155 EAST 44th STREET
NEW YORK, N. Y.

There's Lots to Learn About PAINT

EVERY house needs paint, inside and out, not only when it is built but periodically throughout the years to come. So it is important to know what makes a good painting job.

Good painting is always the product of three things: (1) a paint of the right composition for the particular job at hand; (2) good painting conditions at the time the work is done; and (3) good workmanship.

The average home owner cannot hope to qualify as an expert in paint because to do so he would have to study a subject of immense technical complexity. So his best recourse is to entrust his entire job to a contracting painter of known skill and good local reputation.

BUY GOOD PAINT

But if you like to delve into such a subject to some extent, it is well to begin with a knowledge of the labor costs. Painting labor is usually two to three times the cost of the materials. It takes a painter just as long to put on a poor quality paint as to apply the very best materials. Therefore, it is false economy to attempt to save costs by buying cheap paints.

When buying exterior paints for outside woodwork, siding, trim, etc., the choice lies between the so-called pure single pigment paints and mixed paints. White lead in oil is the only quality pure pigment paint employed in residential work, for white lead is the only material that combines within itself the desired qualities of durability, resistance to weathering, good covering power and slow chalking which makes the whole surface easy to repaint.

READ THE LABELS

The better quality mixed paints can be identified by the other elements marked on the label. Zinc compounds are frequently used with white lead to give greater hardness. Titanium compounds will be found on many labels, in combination with lead and usually zinc because titanium is extremely white and has great hiding power. The cheaper exterior mixed paints use these pigments in relatively small quantities and make up the difference with chalks, sands or barium compounds.

Paint is a temperamental material and will not behave well unless it is ap-



Eagle Picher Sales Co.

plied when conditions are just right. Dampness is the great destroyer of good paint, especially dampness on the surface to which it is applied.

Manufacturers always provide carefully worded instructions for the use of their products and failure to follow these instructions places the blame squarely upon the user. A good painter will take great precaution with the preparation of the surface and will wait until the weather is good (if it is outside work) or there has been ample time for drying out plaster in the case of interior work before he will waste labor and materials under conditions that are bound to cause difficulties.

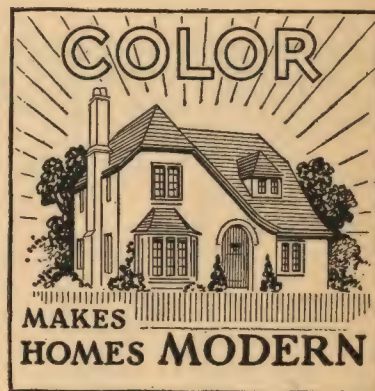
DUST OFF THE CHALK

Exterior paints should be renewed every three to five years, even with good quality materials. The best outside paint wears gradually to a chalky surface that can easily be dusted off leaving the remaining coating firmly adhered to the material underneath. A new coat should be applied before this chalking wears down to the wood.

Buy high quality paints from reputable manufacturers; have them applied by an experienced and reliable painter; and repaint before the original coating has worn through to the underlying surface.

There's Always
Long Life
Ahead
for
Benjamin Moore & Co.'s
Paints
Because of the
Many Years of
Experience
Behind Them

Your Benjamin Moore & Co. Paint Dealer and your Painting and Decorating Contractor can help you make your home more attractive—more economically. They have a fund of knowledge for the achieving of beautiful—and practical—effects. Benjamin Moore & Co. Paint Dealers know paint—and their experience is yours for the asking. Protection, Beauty and Economy go hand in hand when you specify and use Benjamin Moore & Co.'s Paint Products for both Exterior or Interior use.



Benjamin Moore & Co.
Paints, Varnishes and Mureasco

NEW YORK
NEWARK
CHICAGO
CLEVELAND



ST. LOUIS
CARTERET
DENVER
TORONTO

Use Moore Paint

Will Your WIRING be Adequate?

HAVE you considered to what a great extent the use of electricity in modern homes contributes to your comfort and removes drudgery from most of the household tasks. Today it cleans our floors and furniture, cooks and preserves our food, regulates our heating plant, does our laundry. It provides us with hot water, extracts our orange juice, runs our radio, shaves our faces, runs our clocks and floods our homes with light.

To provide for an electrical system that will do all of this and also be adequate for future household tasks at the time of building the home will in the end save much expense.

With the constant introduction of new appliances the difficulties of expanding old electrical installations to meet increasing needs becomes a serious problem. It often becomes necessary to make expensive changes to accommodate circuits for electric ranges, laundry equipment and additional outlets to permit the convenient use of additional lighting and appliances such as vacuum cleaners, radios, etc.

Today's homes, when being built, must be prepared for tomorrow. Insulation of board and rock wool are put into the walls of homes to effect economies in heating thereby making it almost impossible to add additional

outlets after the home is built. Tomorrow's electrical system must accommodate not only today's electrical servants, but many other appliances that we don't even dream of today.

Even though it is not planned to install immediately an electric range,

water heater, air conditioning equipment, laundry equipment, etc., provision should be included in the electrical entrance equipment to insure the amount of electricity eventually needed. Thus future electrical needs will be safeguarded and the resale value of the home will be enhanced.

The electrical entrance with its branches plays a very important part because it not only makes the use of electrical appliances possible, but is the safety valve to the electrical system as well as the protector of the home.

With the knowledge gained from past ex-

perience in meeting the needs of expansion it is possible to lay out an electrical system free from future limitations. If this is done at the time of building the home it entails very little extra expense.

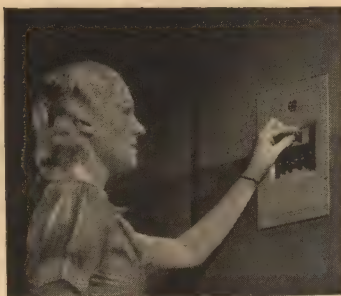
Thus the home wiring system should have sufficient capacity to handle future increases of current to meet the demands of more electrical appliances or illumination. This means, (1) a service entrance of sufficient capacity for such a wiring system; (2) an adequate number of branch circuits of large enough wire to deliver full power to every outlet; (3) an adequate number of outlets for lamps and appliances; and (4) enough switches properly placed for convenient control.

CHECK THESE ITEMS, TOO

There should be two types of circuits in every home—those for lights and those for appliances.

Provide heavy-duty circuits and outlets for the electric range, electric water heater, large-size room heater, air-conditioning equipment, etc. Have all the wiring done by a licensed electrician in accordance with the National Electrical Code and local ordinances governing wiring installations.

Provide wiring for doorbells, buzzers, and radio (antennae and ground wires).



Square D Co.

All of the electricity used in your home must pass thru the main electrical service inlet cable. Frequently main inlet equipment of too small capacity is installed, preventing the use of many electrical appliances unless an expensive change in entrance equipment is made. Equipment with ample capacity for future needs can be installed originally at very small additional cost.

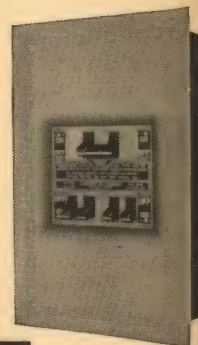
WHAT ABOUT THE OTHER ENTRANCE TO YOUR HOME?



At your other entrance—the electrical entrance—through which all current enters your home—have your contractor install the

SQUARE D MULTI-BREAKER

This modern circuit breaker device requires no fuses. Restoring the current after short circuits or overloads is as simple and safe as operating a wall switch.



SQUARE D COMPANY
DETROIT, MICHIGAN

Write for
Folder
CA-542X

ADEQUATE WIRING

NATIONAL ADEQUATE WIRING BUREAU

Informational Bulletin from Bureau Headquarters, 155 E. 44th St., New York, N. Y.

Reproduced through
the courtesy of House
& Garden from the
March, 1939 issue.



Copies of the Handbook of
National Standards: Resi-
dential Wiring Adequacy
may be ordered at ten cents
each from The National
Adequate Wiring Bureau,
155 East 44th Street,
New York City.

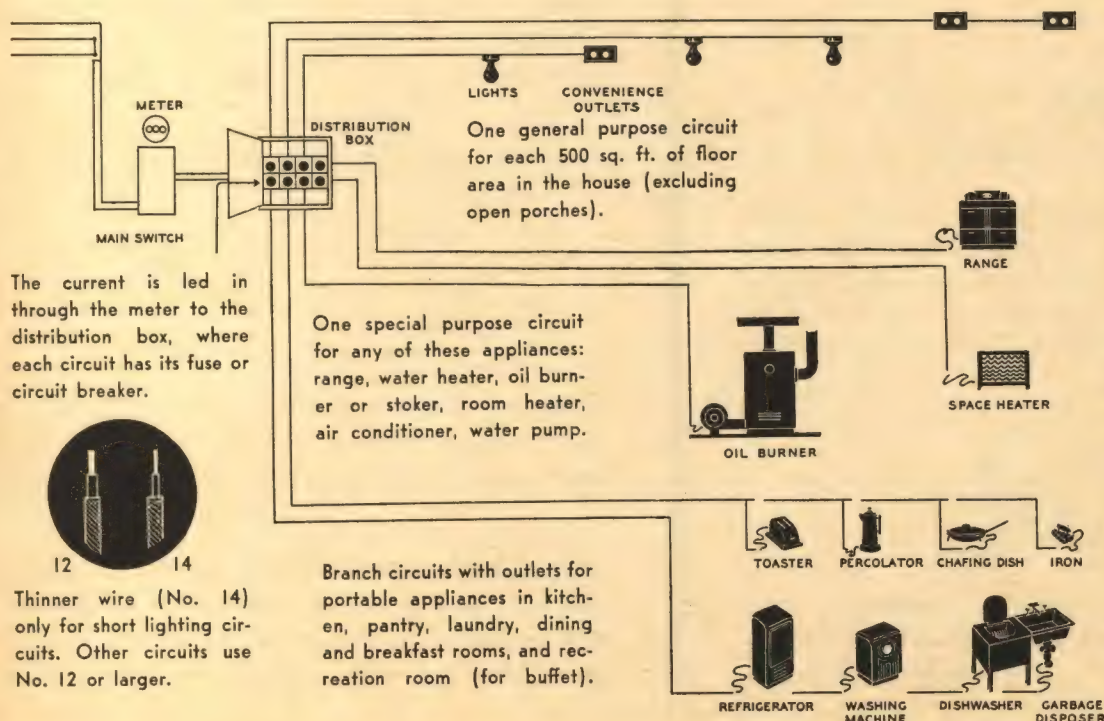
Adequate wiring is essential for good lighting, efficient functioning of appliances, and economy. Overloaded circuits cause dimming lamps, crackling radio and wasteful use of current. So look for adequate sized wire, a sufficient number of outlets and switches conveniently placed. Following are three essential rules for adequacy in home wiring:

RULE A. (Living rooms, bedrooms) No point along the floor line in any wall space unbroken by a doorway should be more than 6 ft. from an outlet in that space. Also at least one duplex outlet in each usable, isolated wall space 3 ft. or more in length at the floor line. Also one outlet flush in the top of each mantel shelf, if construction permits.

RULE B. (Halls, stairs, rooms with 2 or more entrances, garage) To allow movement throughout the house, turning lights on ahead and turning them off after passing, use multiple control switches: one switch at main entrance door to each room, multiple control if commonly used doorways are more than 10 ft. apart; two three-way switches (located at head and foot of stairway) for each lighting unit on stairways leading to finished halls or rooms.

RULE C. (Kitchen, pantry, laundry, basement) There should be lighting units at each important work area: sink, work table, sewing counter, cabinet, range, etc., over trays, tubs, ironer, etc., at furnace, workbench, etc.

SIMPLIFIED CIRCUIT LAYOUT



Where there is a long circuit it should be fitted with a heavier wire (No. 12) to avoid wasteful choking of the current supply.

Each of these heavy-duty appliances requires a special heavy wire circuit designed to carry all the anticipated power loads.

All appliance branch circuits should be fitted with heavy (No. 12) wire for efficient service.

Branch circuits with outlets for portable appliances in kitchen, pantry, laundry, dining and breakfast rooms, and recreation room (for buffet).

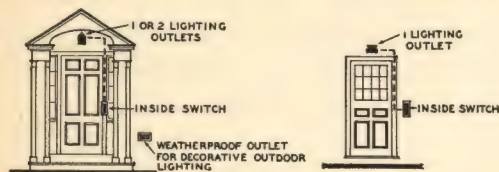
The current is led in through the meter to the distribution box, where each circuit has its fuse or circuit breaker.



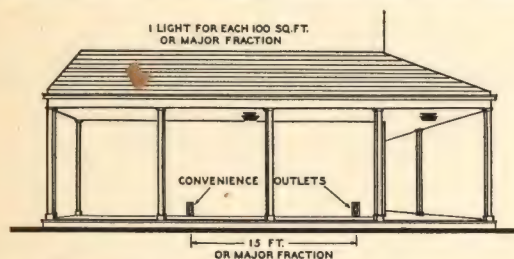
Thinner wire (No. 14) only for short lighting circuits. Other circuits use No. 12 or larger.

WHAT ELECTRIC OUTLETS YOU SHOULD HAVE, AND WHERE

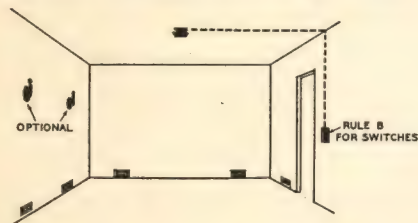
Convenience outlets should always be of duplex or other multiple type, except where a special outlet is provided for a single unit such as a ventilator



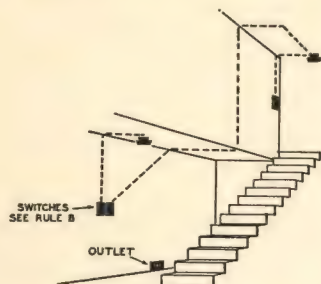
ENTRANCE DOORS may need waterproof outlets



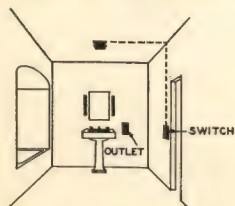
PORCHES need appliance outlets for buffet meals



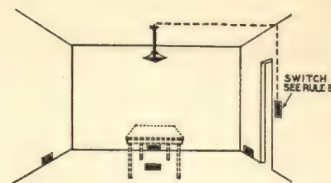
LIVING ROOMS AND BEDROOMS which are low-ceilinged or more than 400 sq. ft. in area need more than one ceiling unit if this is main source of light



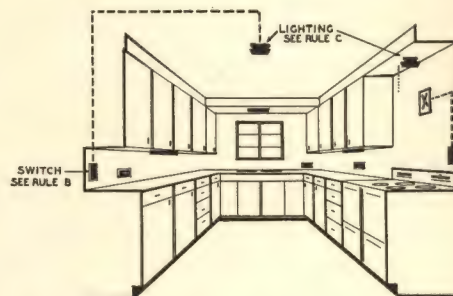
HALLS AND STAIRWAYS always should be provided with one duplex outlet for every 20 ft. of hall or major fraction thereof, and one ceiling light for each 15 ft. or major fraction; also one light at the bottom, and another at the head, of each stairway



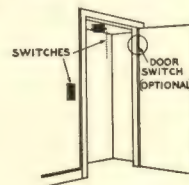
BATHROOMS will need one convenience outlet (away from tub), wall brackets flanking the mirror, a ceiling light if the room is over 60 sq. ft. in area



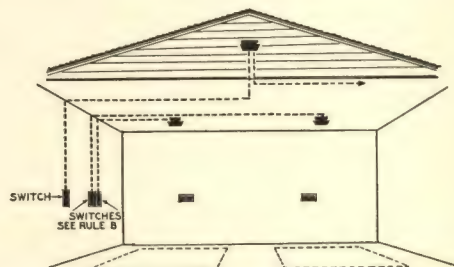
DINING ROOMS require a minimum of two convenience outlets, one of which may be a floor outlet under the table; also at least one duplex outlet in each wall space where a serving table might be placed. A ceiling unit is preferable to wall brackets



KITCHENS AND PANTRIES should have a minimum of three elbow-height convenience outlets, one at each work area; special-purpose outlets for range, refrigerator, etc.; special switch for ventilating fan if installed. In addition to a ceiling light there should be special lights for the various work areas



CLOSETS should be fitted with an interior light controlled by a pull chain or a wall switch or, if preferred, by a button-type automatic door switch



GARAGES need a convenience outlet 4 ft. above floor at rear of each car stall, also light over each hood and an outside light with switch in the house

ATTICS AND BASEMENTS will need a wall switch with pilot light at the end of stairs to control at least one light; also at least one lighting outlet and one convenience outlet adjacent to work spaces

ANACONDA COPPER, BRASS AND BRONZE

in the Home



IN BUILDING A NEW HOME, you naturally want the most value for every dollar you spend. To make certain of this, care must be exercised to distinguish between what is really important and what only *seems* important. There are many desirable things—accessories that are useful but not essential—on which action can be postponed.

But there are other things that are vital; matters of sound construction—*fundamental* things, too often overlooked, that mean so much to the enjoyment of your home in after years. Such things, for example, as water pipes and storage tanks . . . roofing, flashings, gutters and rain pipes . . . window and door screens.

These items, all of them important, are frequently neglected because they seem but incidentals; neglected in some instances so badly that they soon constitute a burden of upkeep and repair expense that strains the family budget and takes from home ownership much of the pleasure it should rightfully hold.

* * *

The ANACONDA PRODUCTS described on the following pages are giving rust-free, trouble-free service . . . and saving money . . . for thousands of homeowners who have had the foresight to provide for the future by spending a little more at first for rustless copper, brass and bronze.



THE AMERICAN BRASS COMPANY
GENERAL OFFICES • WATERBURY, CONNECTICUT

ANACONDA SHEET COPPER

For non-rust Gutters, Rainpipes, Flashings

REGARDLESS of the type of roofing, extreme care should be used in selecting the metal which is needed for the *roof drainage* system. Repairs and replacements are an item of future expense that can easily be avoided.

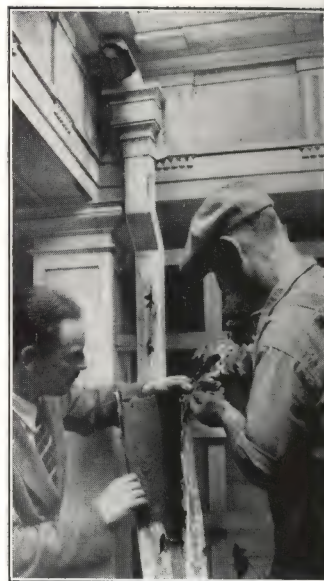
Valleys, gutters and rain-pipes should by all means be made of copper. Rain water, concentrating in the valleys and gutters, and rushing in flood volume to the downspouts, severely tests rust-weakened metal. That is why metals that rust usually last only five to eight years, while copper serves indefinitely.

The same is true of flashings—strips of metal which are used to water-proof joints around chimneys, vents, windows, doors and other roof and wall intersections. It is most important that the metal used be copper because ferrous flashings will soon rust, admitting

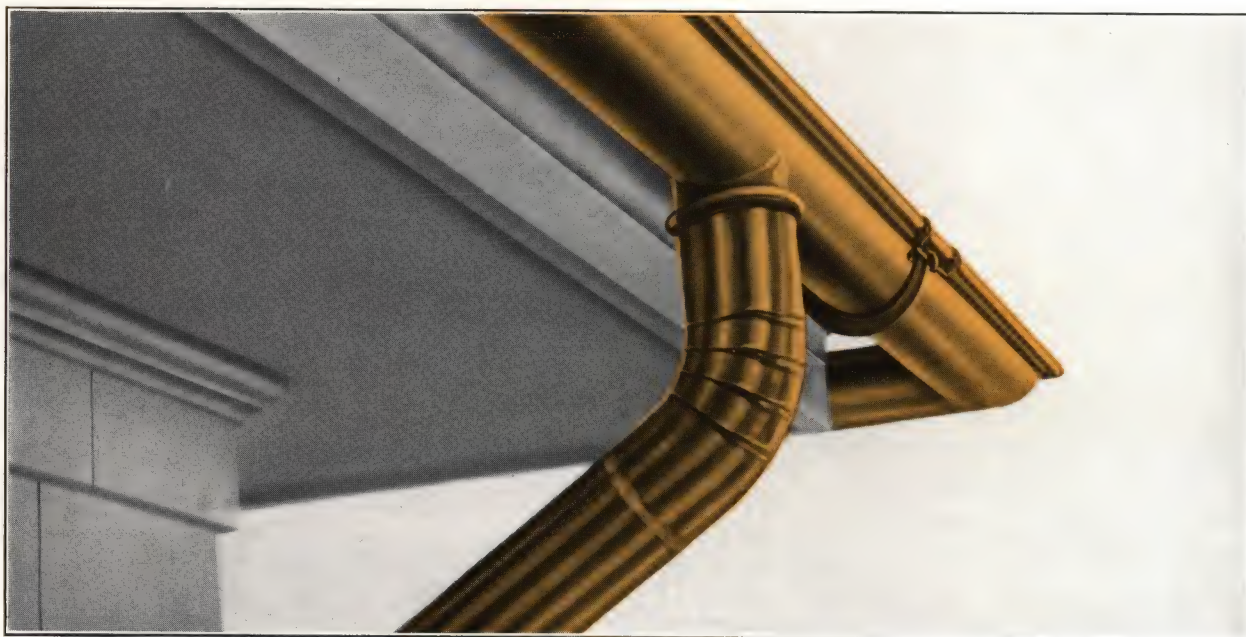
water to rot the woodwork and perhaps to cause considerable damage to the interior of the house.

Copper sheet metal work is not expensive. Though it does cost slightly more in the beginning, it saves far more in the end by forever

eliminating upkeep expense due to rust. Copper, for instance, never need be painted, but if ferrous metal is used, constant painting to delay rust adds another annoying expense.



Many homeowners are insisting on copper. They have found that, no matter how "cheap" rustable gutters and rain-pipes seem to be, they always cost far more in the end.

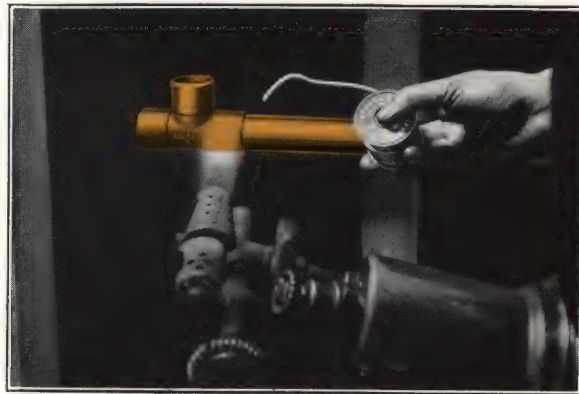


ANACONDA COPPER WATER TUBES

For Low Cost, Rust-Proof Plumbing and Heating Lines

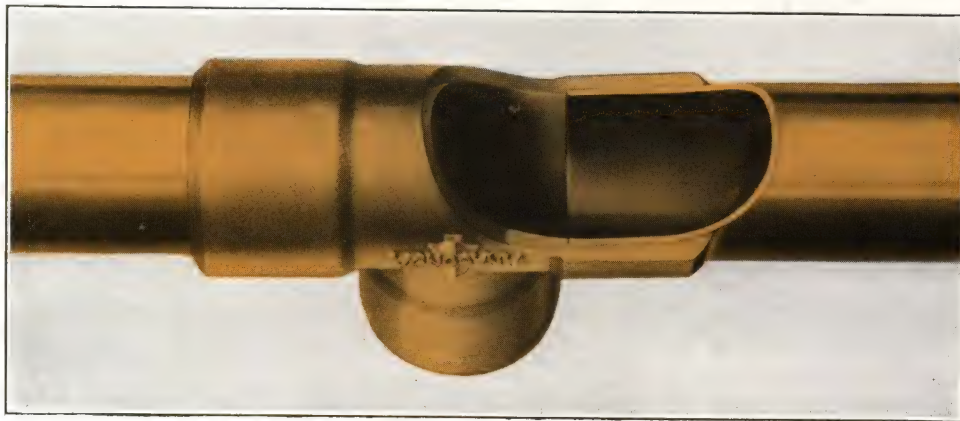
A FULL flow of rust-free water—at all times should be the goal of every homeowner. For freedom from rust means better, longer plumbing service *at a saving*. Thus, the effective resistance to corrosion that brass pipe and copper tubes offer meets a nation-wide need. Correctly installed, they provide dependable and economical protection against pipe failures due to rust.

Anaconda Copper Tubes and Anaconda Solder-Type Fittings are finding widespread use because a complete installation costs but a little more than one of short-lived rustable pipe and fittings. This low cost is due to the fact that solder-type joints eliminate threading—making possible lighter tube walls, less weight per foot and a corresponding reduction in cost. Labor costs are also minimized. However, such important points as thorough cleaning, correct heat, proper fluxing and the right solder make it imperative to *employ an experienced plumbing contractor*.



With rust-proof piping available at such reasonable cost, it is evident that its use affords definite, worthwhile savings, in addition to the convenience of a full flow of rust-free water, year in and year out.

Anaconda Copper Tubes are furnished in three wall thicknesses: Type "K", the heaviest, is furnished for underground service and general plumbing. Type "L" Tubes are suitable for interior plumbing. Although Type "M" Tubes have been used, Types "K" and "L" are preferred because of their more substantial wall thicknesses.



Cut-away section showing completed joint of tube and solder fitting. Note the generous depth of the cup and the accurate fit at the end of the tube. This practically eliminates resistance to the flow of water.



SEALING YOUR HOME WITH COPPER

ANACONDA *"Electro-Sheet"* COPPER

A RECENT DEVELOPMENT by the technical staff of the Anaconda Copper Mining Company now makes it possible to damp-proof and weatherproof your home with non-rust copper for very little more than you would have to pay for the perishable materials that have necessarily been used in the past.

This new material, known as "Electro-Sheet", is pure copper produced in very thin gauges by electrical deposition. It is strong and ductile, and provides a lasting seal against wind, weather and moisture. It affords invaluable protection to cellular insulating materials. In winter, it keeps cold out and heat in; in the summer it helps to keep the house cool.

"Electro-Sheet" Copper may be employed wherever building paper is used, and applied by much the same methods. And it costs but little more than high grade building paper.

Applied to foundation walls and cellar floors it keeps basements dry. The foundations and walls of a house damp-proofed and weather-proofed with "Electro-Sheet" are virtually encased in an envelope of Copper.

Anaconda "Electro-Sheet" Copper for damp-proofing and weatherproofing is available in 30 and 60-inch widths and weights of 1, 2 and 3 ounces per square foot, bonded to building paper or surfaced with asphaltic compounds.

WEATHER-PROOFING AND DAMP-PROOFING

It is generally recognized that both comfort and heating economy in a home depend to a great extent upon the efficiency of the outside walls in acting as a barrier against heat, cold, wind and dampness. The tendency towards equalization of temperatures between the inside and the outside is brought about principally by two causes—infiltration and conduction.

INFILTRATION is the passing of cold or warm air, moisture or dust through the joints and pores of ordinary building materials.

"Electro-Sheet" Copper, bonded to or "re-enforced" with building papers or asphaltic compounds, provides a lasting air-tight barrier. It affords a most economical and practical method of preventing infiltration through the surfaces to which it is applied.

CONDUCTION through a building wall is the transference of heat in or out of the building due to the tendency of heat to pass through all materials in various degrees.

This may be overcome by installing cellular insulating materials, a practice which is being followed in many homes being constructed today.

Since most insulating materials are effective only when dry, it is quite important to have the insulation protected by Reenforced "Electro-Sheet" Copper.

CLAPBOARD OR WOOD SHINGLE EXTERIORS

Clapboards or wood shingles as commonly applied to the exterior sides of buildings are never airtight and seldom completely weathertight. In order to minimize infiltration from this type of wall, Reenforced 1-oz. "Electro-Sheet" can be face-nailed to the outside of the sheathing boards.

STUCCO EXTERIOR

Where stucco on metal lath is employed for outside wall facing, efficient waterproofing is of the utmost importance. Reenforced 2-oz. "Electro-Sheet" applied in horizontal courses against the sheathing and securely held in position by furring strips will protect the sheathing against moisture.

BRICK OR STONE VENEER EXTERIOR

Brick or stone veneer outside a wood framed and sheathed house represents a common type of construction. Reenforced 2-oz. "Electro-Sheet" nailed onto the face of the sheathing, with the bottom flashed so as to lead any moisture penetrating through the veneer to the outside, will protect the woodwork from water both during construction and after. "Electro-Sheet" applied in this way also mini-

mizes infiltration and makes the wall surfaces as nearly airtight as possible.

ATTIC FLOOR LINING

Loss of warm air by outward filtration is most marked at the roof because of the tendency of warm air to rise. By applying "Electro-Sheet" materials to the top of attic joists, clamping the edges of the sheets down with furring strips, and nailing the attic flooring over the strips, two dead air spaces are created, which, with the practically airtight copper membrane, will have a very desirable effect as regards heating and air conditioning.

Maximum efficiency is achieved when this construction is used in conjunction with cellular insulation. The copper will protect the insulation from moisture, and will prevent the loss of heat by outward filtration.

VAPOR SEAL AGAINST CONDENSATION

Use of insulation and of air conditioning increases the possibility of condensation in building walls during cold weather. Tighter construction, by not allowing moisture to evaporate to the outdoors, also builds up higher relative humidities and increases the danger of harmful condensation within the walls. Under such conditions it is advisable



Copper Vapor Seal has been fastened to inside of studs over insulating material. As this room will be plastered, metallath is shown partially applied (at top) over the copper.

to provide a vapor seal on the inside of the studding as well as a weatherproofing shield under the outside covering, particularly masonry veneer or stucco.

The picture on the preceding page shows the application of this product to the inside edge of the studs to serve as a vapor seal. Applied as indicated, with all laps tightly clamped, an impervious barrier is provided through which moisture-laden air cannot percolate to condense its vapor as water in the walls. At the same time this inside seal gives added protection against infiltration with a consequent saving in fuel.

CELLAR DAMP-PROOFING AND WATER-PROOFING

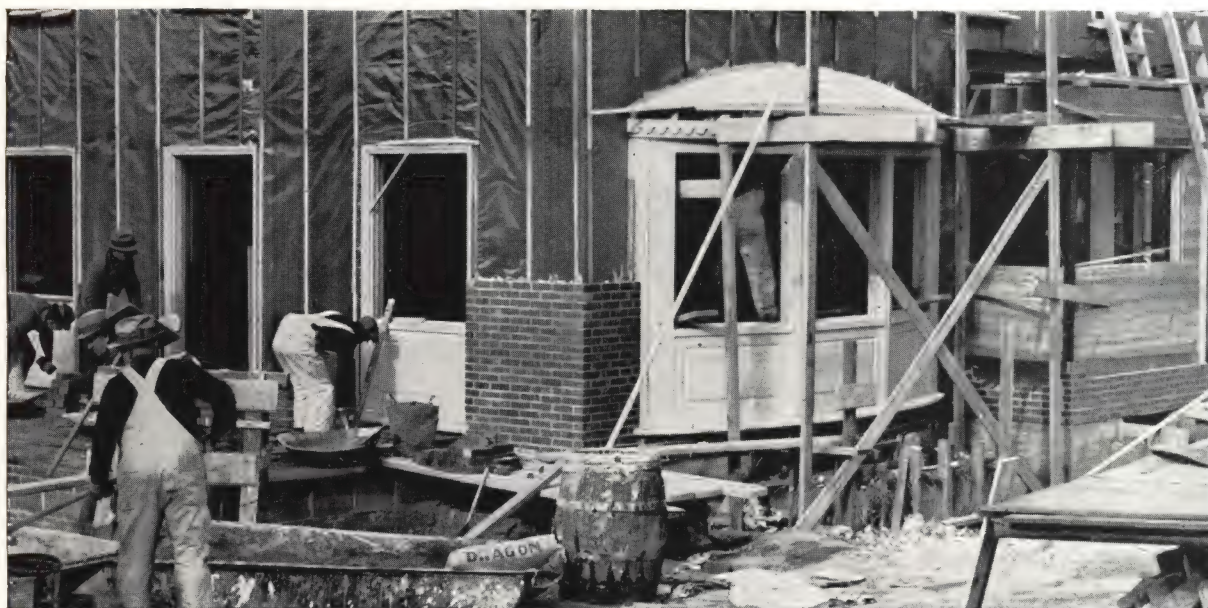
A most effective method of cellar waterproofing is the application of sheets or layers of water-proof material on the outside of the cellar walls. This keeps the masonry dry, resulting in a minimum of movement in the structural materials.

"Electro-Sheet" Copper is ideally suited for this use, because it is rust-proof, strong,

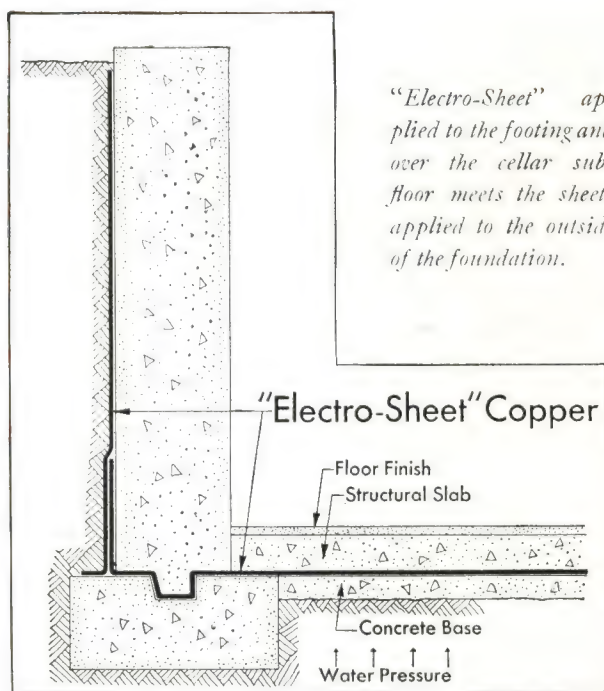


Applied with suitable mastic, this pure copper weighing 2 ounces per square foot is being securely bonded to the outside of foundation wall.

ductile and can be applied readily. For waterproofing where a hydrostatic head exists, two plies of 2 oz. "Electro-Sheet" are usually applied with pitch, asphalt or other mastic. Where only damp-proofing is wanted, one ply should be sufficient. The "Electro-Sheet" is also applied to the concrete footing before the foundation wall is laid, extending through to join the "Electro-Sheet" water-proofing laid between the cellar sub-floor and the finished floor. This should provide complete protection against water and dampness entering the cellar.



"Electro-Sheet" bonded to building paper will keep air and moisture from penetrating the walls.



Architect Praises "Electro-Sheet"

. . . In the building of a frame house in Mariemont, Ohio, "Electro-Sheet" Copper weighing one ounce per square foot was installed between wall sheathing and siding, roof sheathing and shingles, and under the attic floor. The architect for this house has since written:

"During zero winter weather, this house is very easily heated with a hot water system for an insulated house of this size. Also, during the summer, when temperatures hover around 100 degrees, or higher for more than a week, the occupants state that the interior of the house is quite cool and comfortable. I can freely recommend copper used in this manner as a very economical means of preventing heat losses."

TERMITE-PROOFING

The most effective safeguard against termite damage is a copper shield inserted between the masonry foundation and sills. This shield, where it extends beyond the foundation wall, should be bent down at a 45° angle allowing a minimum of 2 inches between the edge of shield and the foundation.

Copper weighing 16 to 20 oz. per sq. ft. (the heavier is less liable to mechanical injury) has been used for some time in this manner. The material is relatively inexpensive, easily applied, highly effective and permanent. Any experienced sheet metal contractor can form and install copper termite shields.

For complete information on termite destruction and detailed methods for applying Copper safeguards, address The Copper and Brass Research Association, 420 Lexington Avenue, New York, N. Y.



INSECT SCREENS OF BRONZE

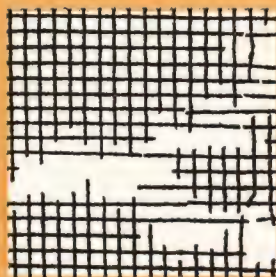
FROM the standpoint of expense, screens of Bronze Wire are the most economical you can use. Remember that screen wire is very fine and quickly rusts through if made of rustable metal. That is why well-built homes everywhere are equipped with screens of bronze wire. Bronze is strengthened copper. It cannot rust. Bronze Screens remain trim and tight for years with a minimum of attention—they do not even require painting.

Instances are not exceptional where bronze screens have been in service for 30 years and are still in good condition. It may be conservatively stated that the life of Bronze Screening is limited only by accidental breakage. Yet its cost is so low (only about 40c more than rustable screening per full-window), that it pays for itself many times over during its long years of service.

Insist on Standard **Weight Bronze Screen Cloth**

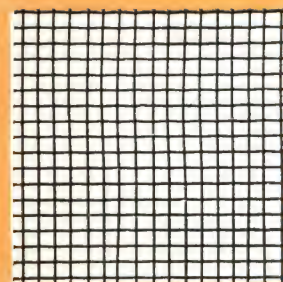
IN RECENT YEARS there has been an increasing amount of sub-standard bronze screen cloth made and sold in the United States. Although it represents only a relatively small portion of the total, the danger of obtaining it unknowingly is ever-present. So make certain that your bronze screen cloth is made of wire which measures .0113 inches in diameter. This is the standard set in specifications of the U. S. Government and the Wire Screen Cloth Manufacturers' Institute. Cloth made of this standard wire, woven 16 meshes to the inch, weighs 15 pounds per 100 square feet.

The American Brass Company does not make screens or screen cloth, but furnishes Anaconda Bronze Wire to leading screen cloth manufacturers.



RUSTABLE SCREENING

Exposed side by side for the same length of time, the condition of this screen cloth speaks for itself. At the end of the test, the bronze was good as new.



BRONZE SCREENING

Luster-Chrome

CABINET HARDWARE IN COLOR

for beautiful kitchens and bathrooms

"DELUXE" MODERN MATCHED DESIGNS

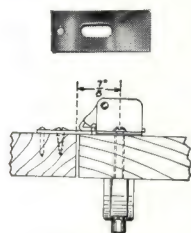
Styled for America's most beautiful homes, Luster-Chrome "DeLuxe" offers the very finest in Cabinet Hardware at surprisingly small extra cost. Each item is heavily Chromium Plated and highly polished to a beautiful "jewel-like" finish. Modern embossed lines and Plastic molded bases offer a choice of Ebony Black — Red — Green — Delphinium Blue — Yellow — and Ivory Colors. Ebony Black is supplied unless otherwise specified on order.

ILLUSTRATIONS BELOW ONE-HALF ACTUAL SIZE — CATCH AT UPPER RIGHT SHOWN ACTUAL SIZE

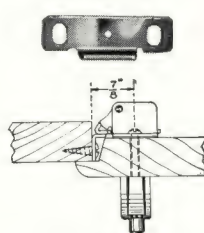


***No. E08215 Brass Door Pull**
2 1/2" Centers—3 3/4" Overall
Polished Chromium—Colored Trim
Retail Value—\$4.44 each; \$5.25 doz.
One dozen in a Carton weigh 1 1/4 lbs.

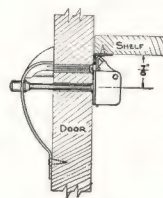
Improved Precision Winged-Latch Bolt mechanism (patent applied for) is made for lifetime service and requires no lubrication for smooth, positive action. Ordinary swelling or shrinkage of doors will not affect catch adjustment.



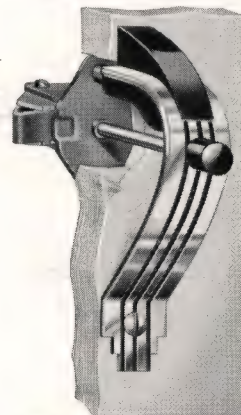
Catch Applied to
Flush Door
Using "B" Strike



Catch Applied to
Overlapping Door
Using "D" Strike



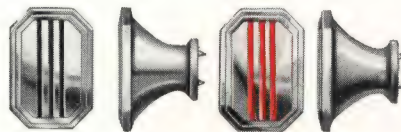
Shelf Application
For Double Doors
Using "D" Strike



***No. E08760 Brass Catch**
2 1/2" Centers—3 3/4" Overall
Polished Chromium—Colored Trim
Retail Value—\$6.65 each; \$7.80 doz.
One dozen in a Carton weigh 2 3/4 lbs.

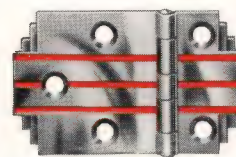


***No. E08260 Brass Drawer Pull**
3" Centers—4 1/4" Overall
Polished Chromium—Colored Trim
Retail Value—\$4.44 each; \$5.25 doz.
One dozen in a Carton weigh 1 1/2 lbs.

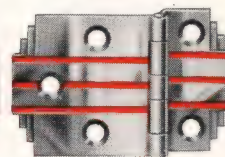


No. E0563 Brass Knob
Stainless Steel Cap—1 1/4" x 7/8"
Polished Chromium—Color Embossed Lines
Retail Value—\$2.21 each; \$2.50 doz.
One dozen in a Carton weigh 1 lb.

***Design Patent No. 109464**



No. E3002—Steel
No. E03002—Brass
1 1/2" Joint—2 1/2" Width
For Flush Doors



No. E3004—Steel
No. E03004—Brass
1 1/2" Joint—2 1/2" Width
For 3/8" Offset Doors

RETAIL VALUE

Steel Hinges—Polished Chromium, Color Embossed Lines—\$4.40 pair; \$4.80 dozen pairs.
Brass Hinges—Polished Chromium, Color Embossed Lines—\$6.00 pair; \$7.20 dozen pairs.
One dozen pairs in Carton weigh: Steel, 2 1/4 lbs.; Brass, 2 3/4 lbs.

ENVELOPE PACKING: Each item individually wrapped and packed in printed envelope to protect finish and prevent loss of screws and small parts. Catches supplied with two strikes for flush and offset doors and simplified instructions for installing. The "Amerock" seal on every package is your guarantee of quality.

"MATCHED" DESIGNS: Knobs, Pulls, Hinges, and Catches of each design group "match" perfectly in design. This permits complete harmony of pattern, to complete the beauty of the finished installation.

OTHER FINISHES: The finish regularly supplied is specified in this Catalog for each item. Other finishes, including Bright or Dull Brass, Statuary Bronze and Dull Ebony Black can be supplied on special order.



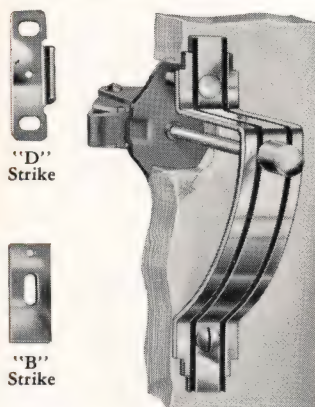
AMERICAN CABINET HARDWARE CORP.



ROCKFORD, ILLINOIS

COPYRIGHT 1939

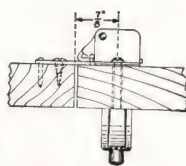
Master "Matched" designs provide Color-Embossed Cabinet Hardware in the medium price field. Regularly supplied in Polished Chromium with Ebony Black Embossed Modern Lines. Can also be had with Red, Green, Delphinium Blue, Yellow, and Ivory Colors to order.



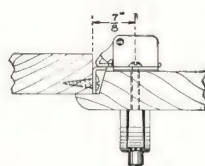
"D" Strike

"B" Strike

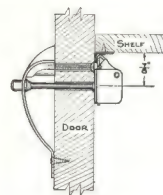
No. E04650 Brass Catch
2 1/2" Centers—3 1/2" Overall
Pol. Chromium—Color Embossed
Retail Value—\$.55 each; \$6.60 doz.
One doz. in a Carton weigh 2 3/4 lbs.



Catch Applied to
Flush Door
Using "B" Strike



Catch Applied to
Overlapping Door
Using "D" Strike



Shelf Application
For Double Doors
Using "D" Strike



No. E0252 Brass Door Pull
2 1/2" Centers—3 1/2" Overall
Pol. Chromium—Color Embossed

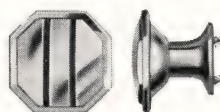
Retail Value—\$.28 each; \$3.35 doz.
One doz. in a Carton weigh 1 1/4 lbs.



No. E0265 Brass Pull
2 1/2" Centers—3 1/8" Overall
Pol. Chromium—Color Embossed
Retail Value—\$.28 each; \$3.35 doz.
One doz. in a Carton weigh 1 1/2 lbs.

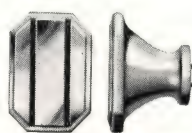


No. E0266 Brass Pull
2 3/4" Centers—3 1/2" Overall
Pol. Chromium—Color Embossed
Retail Value—\$.31 each; \$3.70 doz.
One dozen in a Carton weigh 2 lbs.



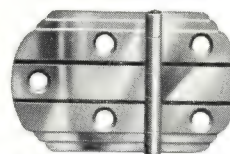
No. E572 Steel Knob
(Stainless Steel Cap)
1 1/4" Size
Polished Chromium—
Color Embossed

Retail Value
\$.18 each; \$2.15 doz.
One doz. in a Carton
weigh 1 lb.

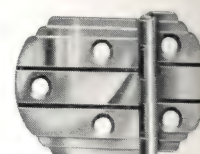


No. E0562 Brass Knob
(Stainless Steel Cap)
1 1/4" x 7/8"
Polished Chromium—
Color Embossed

Retail Value
\$.21 each; \$2.50 doz.
One doz. in a Carton
weigh 1 lb.



No. E3022 Steel Hinge
1 1/2" joint—2 1/4" wide
For Flush Doors



No. E3024 Steel Hinge
1 1/2" joint—2 1/8" wide
For 3/8" Offset Doors

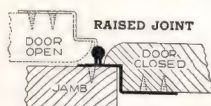
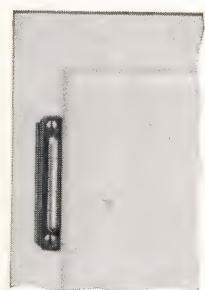
Retail Value—Polished Chromium, Color Embossed
\$.35 pair; \$4.20 dozen pairs
One dozen pair in a Carton weigh 2 lbs.



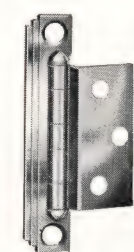
No. E0253 Brass Pull
3 1/4" Centers—4 1/4" Overall
Polished Chromium—Color Embossed Lines
Retail Value—\$.25 each; \$3.00 doz.
One dozen in a Carton weigh 1 1/4 lbs.

MODERN SEMI-CONCEALED CABINET HINGES

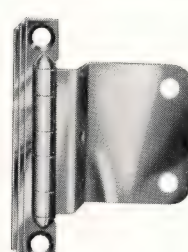
Raised five-knuckle joints permit full back swing of Lip Doors, see profile views.



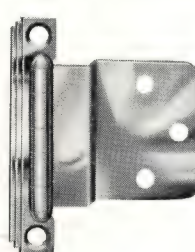
Semi-Concealed Hinges show only the small leaf and knuckle when door is closed. Illustration above shows application of raised-joint hinge on overlapping (lip) door.



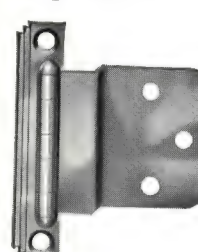
No. E7640—Steel
No. E07640—Brass
For Flush Doors



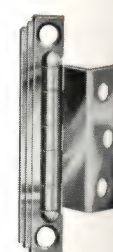
No. E7660—Steel
No. E07660—Brass
For 3/4" Flush Doors



No. E7558—Steel
No. E07558—Brass
For Overlapping Doors
3/8" Inset



No. E7570—Steel
No. E07570—Brass
For Overlapping Doors
1/2" Inset



No. E7610—Steel
No. E07610—Brass
For Overlapping Doors
1/2" Inset or More

Retail Value—Polished Chromium Plated
Steel Hinges—\$.35 pair; \$4.20 dozen pairs
Brass Hinges—\$.55 pair; \$6.60 dozen pairs
Colored lines in small leaf can be supplied at extra cost of
\$.40 per dozen pairs added to above prices.

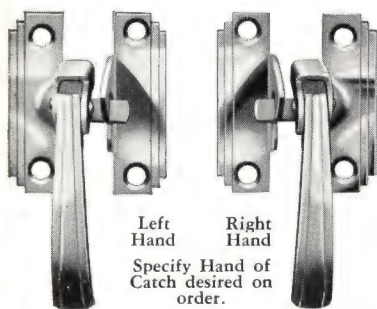
Hinges are wrapped and packed each pair with screws in a printed envelope.

One dozen pairs in a Carton weigh:
Nos. E7610 and E7640 (Steel)—1 3/4 lbs.
Nos. E07610 and E07640 (Brass)—2 1/4 lbs.
Nos. E7558, E7570, and E7660 (Steel)—2 1/4 lbs.
Nos. E07558, E07570, and E07660 (Brass)—2 3/4 lbs.

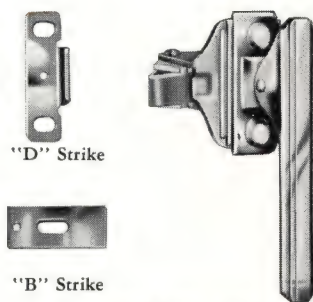
ILLUSTRATIONS ARE ONE-HALF ACTUAL SIZE

"STANDARD" MODERN MATCHED DESIGNS

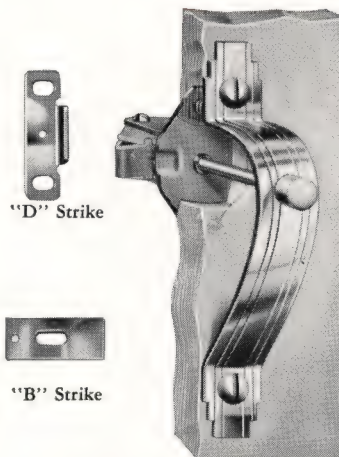
"Standard" designs offer quality Cabinet Hardware at lowest cost. Attractive, modern styling in "matched" patterns of Hinges, Knobs, Pulls, and Catches. Steel items have heavy under platings of both Copper and Nickel to assure a Chromium plating of lasting beauty.



No. E3618 Steel Catch
Polished Chromium Plated
Retail Value—\$.37 each; \$4.45 doz.
One doz. in a Carton weigh $1\frac{3}{4}$ lbs.



No. E4659 Steel Catch
(Pendant Type Handle)
Polished Chromium Plated
Retail Value—\$.50 each; \$6.00 doz.
One dozen in a Carton weigh $2\frac{1}{2}$ lbs.



No. E4647 Steel Catch
3" Centers— $4\frac{1}{8}$ " Overall
Polished Chromium Plated
Retail Value—\$.40 each; \$4.80 doz.
One doz. in a Carton weigh $2\frac{1}{2}$ lbs.



No. E357 Steel Door Pull
3" Centers— $4\frac{1}{8}$ " Overall
Polished Chromium Plated

Improved Spring Catch in Modern Design. $\frac{3}{8}$ " length overall. Not reversible, but completely assembled at factory as one fixed unit. Each Catch supplied with two strikes—for flush and overlapping doors of standard $\frac{3}{8}$ " offset.



No. E358 Steel Pull
 $3\frac{1}{4}$ " Centers— $4\frac{1}{4}$ " Overall
Polished Chromium Plated
Retail Value—\$.15 each; \$1.80 doz.
One doz. in a Carton weigh 1 lb.



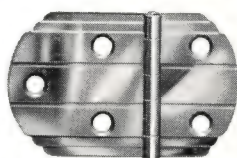
No. E258 Steel Pull
 $2\frac{1}{2}$ " Centers— $3\frac{1}{8}$ " Overall
Polished Chromium Plated
Retail Value—\$.19 each; \$2.25 doz.
One doz. in a Carton weigh $1\frac{1}{2}$ lbs.
No. E0258 Brass Pull—\$3.00 doz.

Catches E4647 and E4659 utilize improved Winged Latch Bolt mechanism, (patent applied for) — see full description under No. E04650 Catch on opposite page.

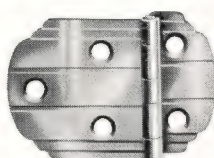
Retail Value
\$.15 each; \$1.80 doz.
One doz. in a Carton weigh 1 lb.



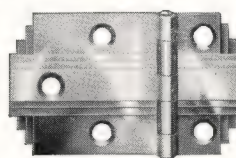
No. E570 Steel Knob— $1\frac{1}{4}$ " Size
Pol. Chromium—Stainless Steel Cap
Retail Value—\$.15 each; \$1.80 doz.
One doz. in a Carton weigh 1 lb.



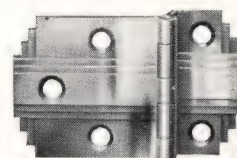
No. E3021 Steel Hinge
 $1\frac{1}{2}$ " joint— $2\frac{1}{4}$ " wide
For Flush Doors



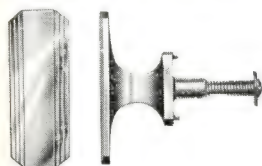
No. E3023 Steel Hinge
 $1\frac{1}{2}$ " joint— $2\frac{1}{8}$ " wide
For $\frac{3}{8}$ " Offset Doors



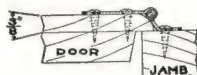
No. E3001 Steel Hinge
No. E03001 Brass Hinge
For Flush Doors



No. E3003 Steel Hinge
No. E03003 Brass Hinge
For $\frac{3}{8}$ " Offset Doors



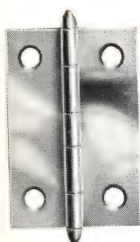
No. E0684 Brass Knob— $1\frac{5}{8}$ "x $\frac{5}{8}$ "
Polished Chromium Plated
Retail Value—\$.33 each; \$3.95 doz.
One doz. in a Carton weigh $1\frac{1}{2}$ lbs.



Retail Value—Polished Chromium Plated
\$.30 pair; \$3.60 dozen pairs
One dozen pairs in a Carton weigh 2 lbs.

Retail Value—Polished Chromium Plated
Steel Hinges—\$.35 pair; \$4.20 dozen pairs
Brass Hinges—\$.55 pair; \$6.60 dozen pairs
One dozen pairs in Carton weigh: Steel, $2\frac{1}{4}$ lbs.; Brass, $2\frac{3}{4}$ lbs.

MISCELLANEOUS HINGES

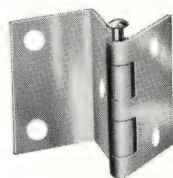


No. E7515— 2 "x $1\frac{3}{8}$ "
Loose Pin—Bullet Tip
Retail Value
Steel—Pol. Chrome
\$.35 pair; \$4.20 doz. pairs
One dozen pairs in a Carton weigh $1\frac{3}{4}$ lbs.

No. E7525— $2\frac{1}{2}$ "x $1\frac{3}{16}$ "
Loose Pin—Bullet Tip
Six Screw Holes
Retail Value
Steel—Pol. Chrome
\$.40 pair; \$4.80 doz. pairs
One dozen pairs in a Carton weigh 3 lbs.



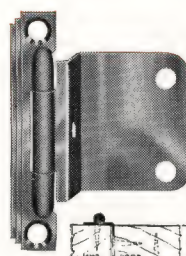
No. E5988— $1\frac{1}{2}$ " Joint
Loose Pin—Bullet Tip
Retail Value
Steel—Pol. Chrome
\$.35 pair; \$4.20 doz. pairs
One dozen pairs in a Carton weigh $2\frac{1}{2}$ lbs.



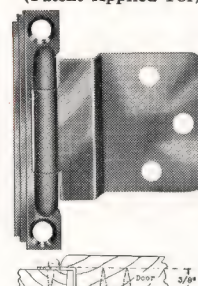
No. E5987— $1\frac{1}{2}$ " Joint
Loose Pin—Plain Tip
Retail Value
Steel—Prime Coat Finish
\$.15 pair; \$1.75 doz. pairs
One dozen pairs in a Carton weigh $2\frac{1}{4}$ lbs.



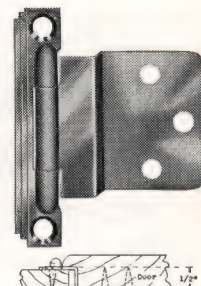
For $\frac{3}{4}$ " Flush Plywood Doors



No. E7760—Steel
For $\frac{3}{4}$ " Flush Doors



No. E7710—Steel
For Overlapping Doors
 $\frac{3}{8}$ " Inset



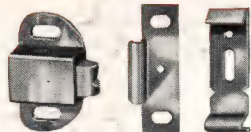
No. E7720—Steel
For Overlapping Doors
 $\frac{1}{2}$ " Inset

Special joint construction (patent applied for) and extra clearance prevent "rubbing off" or "chipping" of paint.

Retail Value—Prime Coat finish \$.15 pair; \$1.80 dozen pairs
One dozen pairs in a Carton weigh $2\frac{1}{4}$ lbs.

ILLUSTRATIONS ARE ONE-HALF ACTUAL SIZE

ROCKFORD, ILLINOIS



No. E3655 "Roll Point"
(Reg. U. S. Pat. Off.)
Catch with "S" and "T"
Strikes for Flush and Off-
set doors.

Retail Value
Chromium Plated
\$.10 each; \$1.20 doz.
2 doz. in a Carton weigh
1 3/4 lbs.

"ROLL POINT" (Reg. U. S. Pat. Off.) CATCHES

No. B3655ST

CABINET MAKER PACK

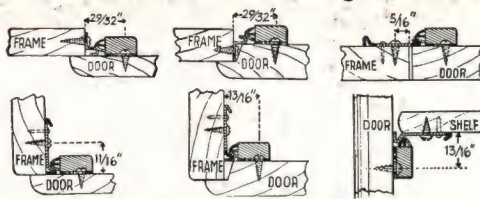
This is the genuine "Roll Point" Catch in Nickel Plated finish. Packed 3 dozen bulk in a Carton for quantity users. Catches, "S" and "T" Strikes, Screws, and Escutcheon Pins in separate small containers to prevent "mixing".

Retail Value

Bright Nickel Plated

\$10.00 gross

3 doz. in a Carton weigh 2 lbs.



Typical Applications of No. E3655

This is the original, perfected "Roll Point" Catch with precision built mechanism to assure easy, yet positive operation and long life. Do not accept cheap imitations made to resemble this catch.



No. B3674 "Roll Point"
(Reg. U. S. Pat. Off.)
Catch 3/8" diameter; 1/2"
depth of boring.

Retail Value—Brass Finish

\$.03 each; \$3.10 gross

1/2 gross in a Carton (not
individually packed)
weigh 3/4 lb.

"SNUG FAST" FRICTION CATCH



No. E3686

Lifetime Double Action Spring
provides smooth, quiet, yet
positive operation. Easy to
apply.

Retail Value—Cadmium Plated

\$.10 each; \$1.20 doz.

2 doz. in a Carton weigh
1 1/2 lbs.

"DORFAST" FRICTION CATCH



No. E3680

Improved construction and
special tempered steel prevents
breakage. Prongs locate strike
automatically on door.

Retail Value

Bright Cadmium Plated

\$.05 each; \$.60 doz.

3 doz. in a Carton weigh
1 1/2 lbs.

"EZ-FLEX" ELBOW CATCH



No. E3675

Genuine piano wire spring as-
sures snappy action and long
life.

Retail Value—Nickel Plated

\$.07 each; \$.80 doz.

Two doz. in a Carton
weigh 1 1/4 lbs.

BREAD BOARD KNOB



No. E550

Steel—5/8" diameter

Fixed wood screw is an integ-
ral part of knob and cannot
come loose at any time.

Retail Value

Polished Chromium

\$.10 each; \$1.20 doz.

One dozen in a Carton
weigh 3/8 lb.

SHELF SUPPORT



No. E3500

Simply bore 1/4" hole to insert
this handy shelf support.

Retail Value

Bright Nickel Plated

\$.15 doz.; \$1.80 gross

One dozen in an envelope; 12
envelopes (one gross) in a
Carton weigh 1 lb.



New Luster-Chrome Demonstrator

Shows Actual Application and Operation of Hardware.

FREE Hardware Returns Cost of Display

Your choice of free "DeLuxe" or "Standard" hardware as shown below returns to you more than the \$10.00 invested, so this beautiful "Luster-Chrome" Demonstrator is actually yours without cost.

No. 300 DEMONSTRATOR

22" high—15" wide

with FREE "DeLuxe" Hardware

Hardware applied has retail value of.....\$10.00

FREE Hardware Assortment

1/2 dozen each of Nos. E0563, E08215,

E08260 and E08760 (see page 1)—

Retail Value.....\$10.40

TOTAL RETAIL VALUE.....\$20.40

DEALER PAYS ONLY.....\$10.00

Demonstrator packed complete with Free
Hardware, weight 14 lbs.

No. 311 DEMONSTRATOR

22" high—15" wide

with FREE "Standard" Hardware

Hardware applied has retail value of.....\$10.00

FREE Hardware Assortment

1 dozen each of Nos. E4647, E357, E358

and E570 (see page 3)—

Retail Value.....\$10.20

TOTAL RETAIL VALUE.....\$20.20

DEALER PAYS ONLY.....\$10.00

Demonstrator packed complete with Free
Hardware, weight 16 lbs.

WHY WE MAKE THIS SENSATIONAL OFFER—Actual store tests have proved that this demonstrator will increase cabinet hardware sales up to 100%, and of course extra sales for you mean extra sales for us. Order your Luster-Chrome Demonstrator from your favorite jobber today!

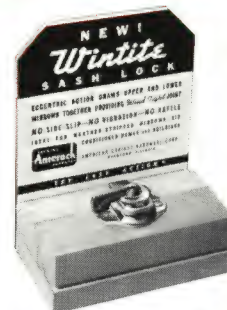
NEW WINTITE SASH LOCK

Supplied of Steel or Brass in Finishes Listed Below.
Be sure to specify Number and Finish wanted on order.



Finish	Steel Cat. No.	Retail Value Each Doz.	Brass Cat. No.	Retail Value Each Doz.
Bright Brass (U.S.3)	E7020	\$0.30 \$3.60	E07020	\$.55 \$6.60
Dull Brass (U.S.4)	E7020	.30 3.60	E07020	.55 6.60
Brass, Oxidized & Relieved (U.S.5)	E7020	.30 3.60	E07020	.55 6.60
Dull Bronze (U.S.10)	E7020	.30 3.60	E07020	.55 6.60
Statuary Bronze (U.S.20)	E7020	.30 3.60	E07020	.55 6.60
Buffed Nickel (U.S.14)	E7020	.40 4.80	E07020	.65 7.80
Dull Nickel (U.S.15)	E7020	.40 4.80	E07020	.65 7.80
Polished Chromium (U.S.26)	E7020	.50 6.00	E07020	.70 8.40

Packed one dozen in a carton; 12 cartons (1 gross locks) in a case. Weight; steel,
2 3/4 lbs. per dozen; brass, 3 lbs. per dozen.



**No. 7000 WINTITE
DEMONSTRATOR**

- **NO RATTLE—NO DRAFT.** Eccentric action draws upper and lower windows tightly together providing air-tight joint.
- **NO SIDE-SLIP.** Straight pull makes "Wintite" especially suitable for weather-stripped windows. Ideal for air-conditioned homes and buildings and for replacement purposes.
- **TAMPER-PROOF.** Draw-bar locks in place—cannot be moved without turning handle.
- **TEMPLATE FOR EASY INSTALLATION.** Template included with each "Wintite" Sash Lock automatically locates screw holes for easy application.

- Shows application and actually demonstrates eccentric action of lock.
- 4 Free Sash Locks with every No. 7000 Wintite Demonstrator.
- Wintite Demonstrator costs Dealer only \$1.20 complete with 4 Sash Locks in Dull Brass finish having retail value of \$.30 each.
- Sale of the 4 Sash Locks returns \$1.20 to Dealer so Wintite Demonstrator is actually his without cost.
- Order YOUR Wintite Demonstrator today from your favorite Jobber!

AMERICAN CABINET HARDWARE CORP.

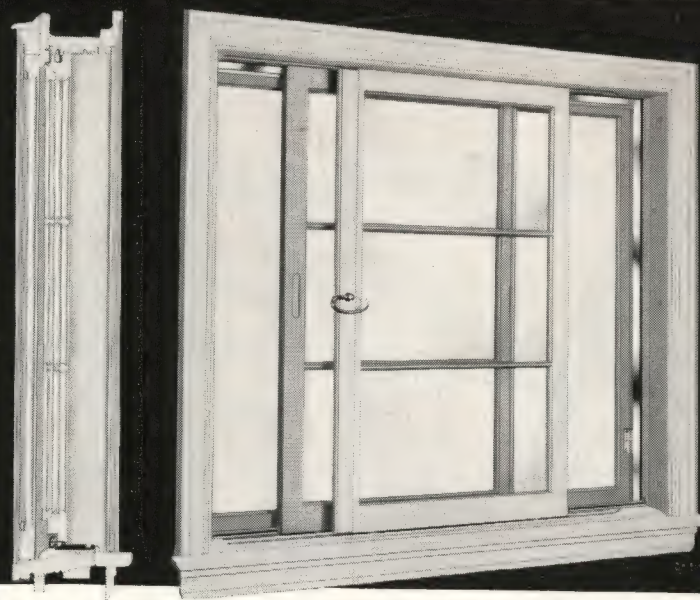
Printed in United States of America



ROCKFORD, ILLINOIS

NEVER BEFORE

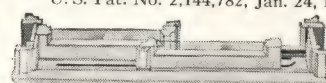
A Window Like This!



U. S. Pat. No. 2,144,782, Jan. 24, 1939



CLOSED



OPEN

ANDERSEN'S NEW HORIZONTAL SLIDING WINDOW

A Moderate Cost Unit of Traditional Andersen Quality



ARCHITECTS LIKE IT!

Because the lid is off on sizes. New freedom in fenestration. Ideal for modern homes where large windows are required.



CONTRACTORS LIKE IT!

Fastest installation of any window unit. Time per opening about 6 to 10 minutes. No complicated assembling. Hardware and weatherstripping applied at factory.



HOME OWNERS LIKE IT!

Talk about easy cleaning. Just lift out the sash. Clean it. Put it back. Outside double glazing moves with sash.

JUST THINK!—A new revolutionary window unit of traditional Andersen quality and at a cost (in conventional sizes) about the same as a good weatherstripped double hung window. But the saving in larger sizes is very substantial, for a single pair of Andersen Horizontal Sliding sash will often replace conventional mullions and multiple units.

You'll like to work with this new Andersen Horizontal Sliding Window. You'll like its quick installation, the easy way it operates, and the fact that it can be used in all kinds of architecture from modern to colonial. Design and construction features found only in Andersen Window Units will mean a **LIFETIME** of window comfort for home buyers or builders.

The beauty of a casement at about the cost of a good weatherstripped double hung—that's Andersen's New Horizontal Sliding Window. For large sash openings it affords savings never before possible because it comes in sizes up to 5', 9" wide, and 5', 7" high, for a single pair of sash. Andersen's New Horizontal Sliding Window is complete, ready to install, including frame, sash glazed with "A" glass bedded in putty, complete Metalane weatherstrip, outside wood screen with 18 mesh bronze screen cloth, inside stops, outside double glazing and complete hardware. All wood parts treated against termites and decay. Frame has wide blind stop construction, head and sill wind breaks and famous Andersen Leakproof Lock Sill Joint.

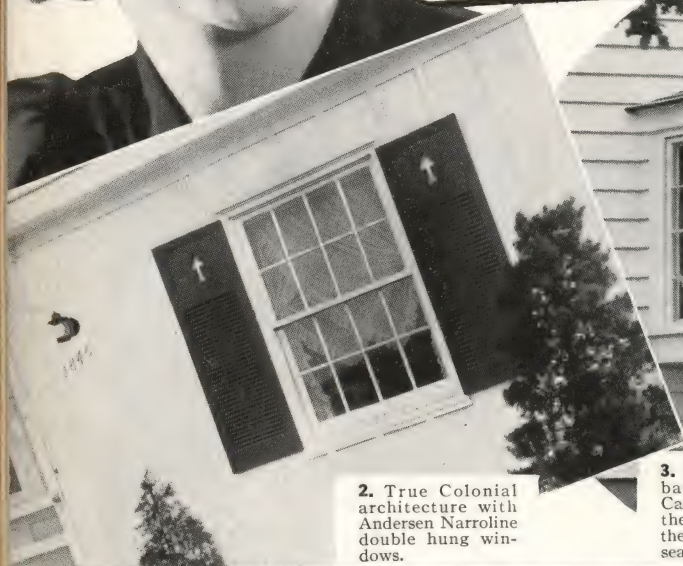
Andersen Corporation, Bayport, Minn.

Remember! WHEN



MRS. HOME OWNER SAYS:

**WINDOW BEAUTY IN OUR
NEW HOME IS SO IMPORTANT
I WANT THE BEST
LOOKING WINDOWS
THERE ARE!**



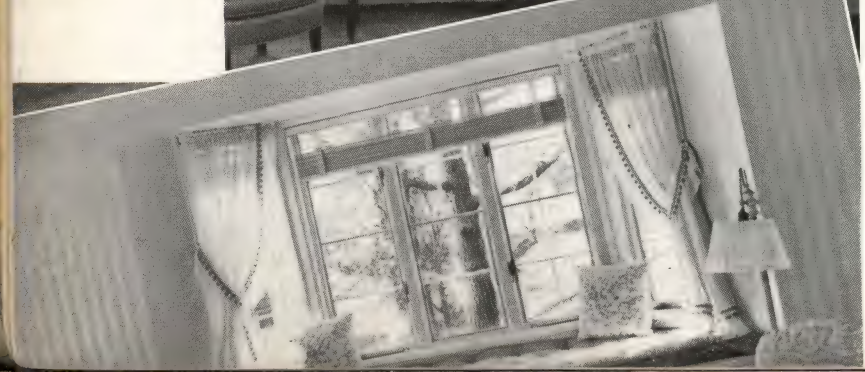
2. True Colonial architecture with Andersen Narroline double hung windows.



3. A lovely oriel or bay of Andersen Casements. This is the outside view of the bedroom window seat shown below.



1. These Andersen Narroline double hung windows show the narrow mullion (space between windows) and generous light areas.



When a prospect asks your advice about windows, remember this important fact. Windows are one of the four irreplaceable essentials in every house. Windows must be bought for the life of the house. So every home, regardless of cost, should have the best in windows. And by "best" we are, of course, referring to Andersen Complete Wood Window Units.

Andersen Complete Wood Window Units have that simplicity of beauty so necessary to architectural harmony. They are precision built, like a fine automobile. Sash and frame are factory fitted, all ready to install. Andersen Wood Window Units are complete with operating equipment, efficient weatherstripping, and "A" quality glass bedded in putty. Chemically protected against termites and decay.

Remember good windows pay for themselves in heat saved, in comfort and convenience. Poor windows are a continual expense. Good windows are a good investment, but "only the rich can afford poor windows."

See following pages for details and sizes.

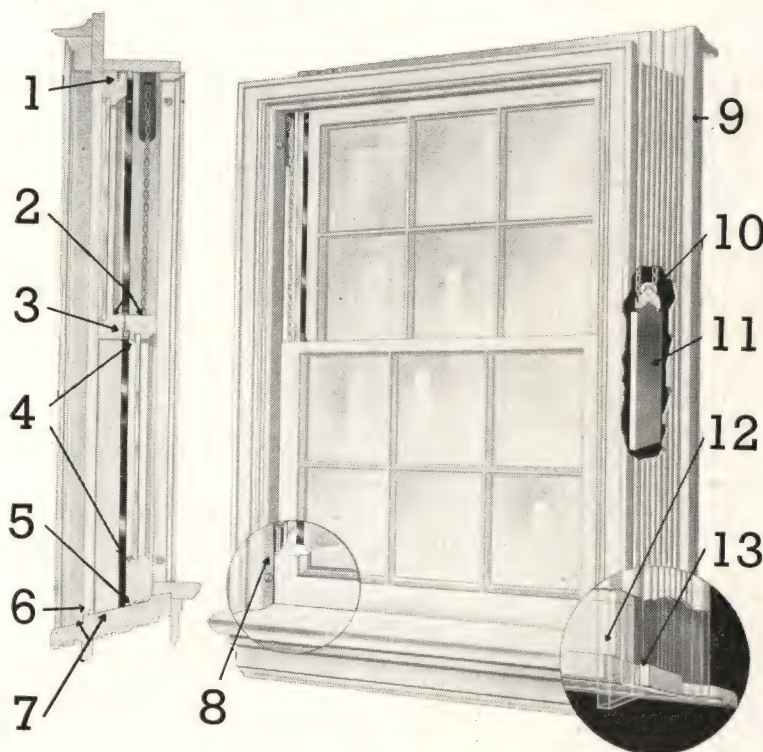
IT COMES TO WINDOWS

Andersen NARROLINE Units

1. Notice how the sash is "grooved" to receive the double action weatherstrip.
2. Extra strength sash, a full 1 1/4 in. thick. Means added years of satisfactory service.
3. Extra efficient weatherstrip where upper and lower sash meet. Positive spring action contact.
4. Glass has putty on both sides and underneath. Wood does not contact glass. Putty seal is complete.
5. Improved fold back spring action weatherstrip on bottom sash.

6. This corner chamfered out to allow for quick drainage. Moisture and dirt do not collect here.
7. Steepslope for quick drainage. Also high shoulder for tight fitting of storm sash.
8. Double action weatherstrip exerts spring action against the sash as well as rib contact. Sash glide smoothly at all times.
9. Wide blind stop is nailed to the studding and seals space between frame and wall. Joint with wall is weathertight.

10. Noiseless, wear-proof pulley with rust-resisting steel sash chain that will not break or wear out.
11. True flat weight counterbalancing. One weight serves both sash. Flat shape allows for modern narrow woodwork.
12. Andersen's special end joint eliminates exposed end wood, prevents swelling and decay.
13. Famous Andersen Locked Sill Joint. This exclusive patented feature actually locks the frame together.



Andersen CASEMENT Units

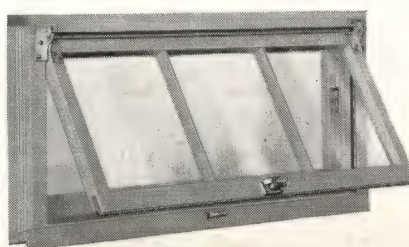
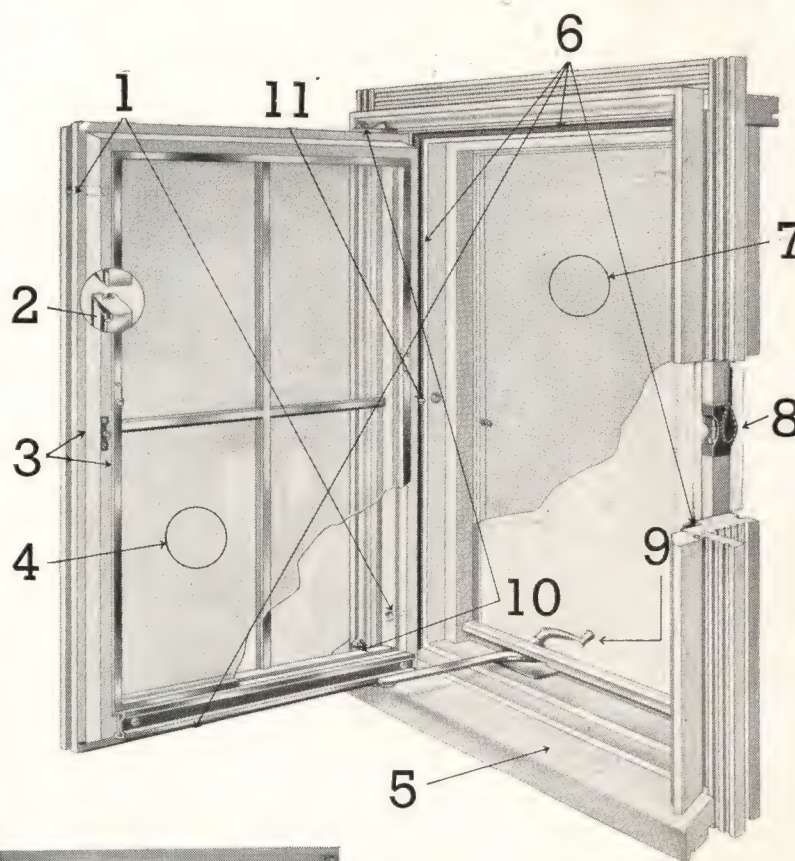
1. Vents between sash and double glazing help prevent fogging and frosting. Make double glazing more efficient.
2. Close-up view of spring action weatherstrip used on inside double glazing.
3. Special design of sash eliminates sticking and binding.
4. The inside double glazing cuts heat loss by radiation 60% — controls condensation.

5. This is the well-known Andersen steep sloping sill. It means quick drainage.
6. Arrows point to the weatherstripping which reduces heat loss by infiltration and keeps out dust and draft.
7. Popular flat type inside screen. Attractive and durable. Light weight.
8. This sash lock pulls window completely shut, then locks it.

- Also ejects it for easy opening. Independent of screen.
9. Under screen sash operator opens window just by turning handle. Also holds sash in any position. No rattling. No swinging.
 10. These extension hinges swing sash out. Outside of glass can be washed from inside.
 11. Burglar bolt falls in place when sash is closed. Sash can't be removed from outside.

MR. HOME OWNER SAYS:

ALL THROUGH DODGING DRAFTS. THE WINDOWS THAT GO INTO OUR NEW HOME HAVE GOT TO BE LEAKPROOF AND WEATHERTIGHT



Andersen BASEMENT Units

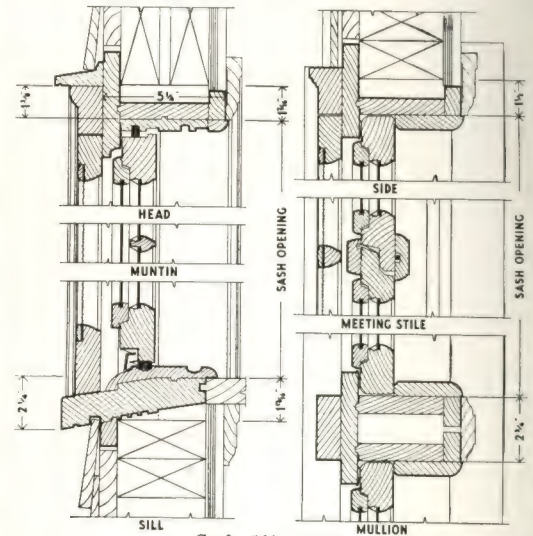
A complete unit ready to install, includes frame, sash, screen, hardware and complete weatherstripping. All ready to install, hardware and weatherstrip applied. Window is automatically held open in two different positions. Cam lock closes sash tightly. Sash can also be easily lifted out of frame. Screen, 18 mesh bronze screen cloth.

Andersen HORIZONTAL SLIDING WINDOW

Sizes and Stock Layouts

MAS. OPG		2-11 ³ / ₁₆	3-8 ³ / ₁₆	4-4 ³ / ₁₆	5-0 ¹³ / ₁₆	5-6 ¹³ / ₁₆	6-0 ¹³ / ₁₆
RGH-STUD OPG		2-10 ⁹ / ₁₆	3-7 ³ / ₁₆	4-3 ³ / ₁₆	4-11 ¹³ / ₁₆	5-5 ¹³ / ₁₆	5-11 ¹³ / ₁₆
SASH OPG		2-7 ⁹ / ₁₆	3-4 ³ / ₁₆	4-0 ³ / ₁₆	4-8 ¹³ / ₁₆	5-2 ¹³ / ₁₆	5-8 ¹³ / ₁₆
SIZE OF LTS		12"	8"	10"	8"	9"	10"
25 ¹ / ₄ "	25 ¹ / ₄ "	2721	3421	4021	4821		
3-3 ³ / ₁₆ "	3-3 ³ / ₁₆ "	2730	3430	4030	4830	5230	
3-9 ⁹ / ₁₆ "	3-9 ⁹ / ₁₆ "	2736	3436	4036	4836	5236	5836
4-1 ⁷ / ₈ "	4-1 ⁷ / ₈ "	2740	3440	4040	4840	5240	5840
4-9 ⁷ / ₈ "	4-9 ⁷ / ₈ "	2746	3446	4046	4846	5246	5846
5-10 ³ / ₁₆ "	5-10 ³ / ₁₆ "		3456	4056	4856	5256	5856
SIZE OF LTS		12"	16 ⁵ / ₁₆ "	20 ⁵ / ₁₆ "	24 ⁵ / ₈ "	27 ⁵ / ₈ "	30 ⁵ / ₈ "
25 ¹ / ₄ "	25 ¹ / ₄ "	27021	34021	40021	48021		
3-3 ³ / ₁₆ "	3-3 ³ / ₁₆ "	27030	34030	40030	48030	52030	
3-9 ⁹ / ₁₆ "	3-9 ⁹ / ₁₆ "	27036	34036	40036	48036	52036	58036
4-1 ⁷ / ₈ "	4-1 ⁷ / ₈ "	27040	34040	40040	48040	52040	58040
4-9 ⁷ / ₈ "	4-9 ⁷ / ₈ "	27046	34046	40046	48046	52046	58046
5-10 ³ / ₁₆ "	5-10 ³ / ₁₆ "		34056	40056	48056	52056	58056

SECTIONAL DETAILS



Patent No. 2,144,782—Jan. 24, 1939
other patents pending

Complete Unit includes---

- FRAME—standard 5¹/₄" jamb with wide blind stop, for all types of wall construction.
- SASH—1¹/₄" thick fitted and glazed SSA, bedded in putty.
- WEATHERSTRIPPING—Silver Seal Metalane, applied at factory.
- OPERATING HARDWARE—includes lock and glides applied to sash.
- SCREEN—1¹/₄" thick Pine frame with 18 mesh bronze cloth, hardware included.
- REMOVABLE DOUBLE GLAZING—fits on outside of sash, complete with fasteners, glazed SSA.
- INSIDE STOPS—Clear Pine unless otherwise specified, fitted ready to apply.

Frames and sash TREATED with Andersen Chemical Preservative.

NOTES

Layout shown at top is for standard cut up lights. Layout shown below for horizontal lights.

Each opening consists of a pair of sash. Cannot be furnished with a single sash or with three ventilating sash in same opening due to method of construction. For widths narrower than minimum shown, use Andersen Casement or NARROLINE Units.

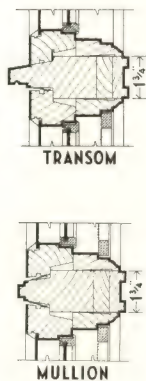
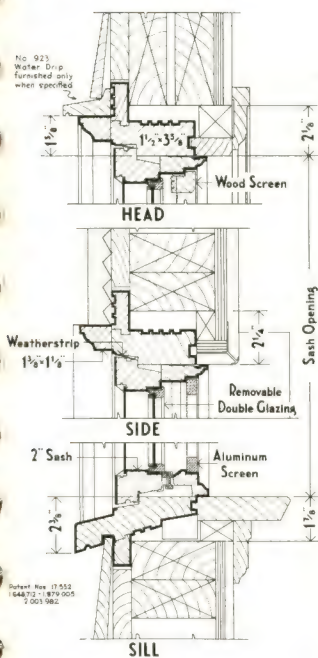
Openings shown are all singles. Multiple openings can be furnished using standard 2³/₄" wide mullion center posts between pairs of sash. To arrive at rough stud opening size for a mullion unit, double the corresponding single sash opening and add 5¹/₄". Masonry openings with 2 inch exterior casings are one inch wider than rough stud openings.

Three-way lock hardware always applied to the sash which slides into the inner track for ventilating. Opposite sash slides in outer track only.

ANDERSEN CORPORATION
BAYPORT, MINNESOTA

Feb. 12, 1940

DETAIL OF *Andersen* CASEMENT WINDOW



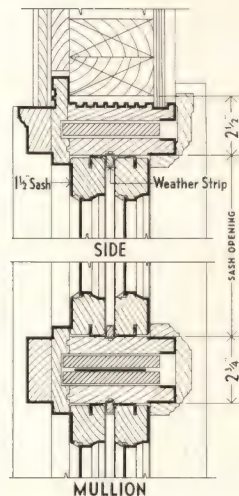
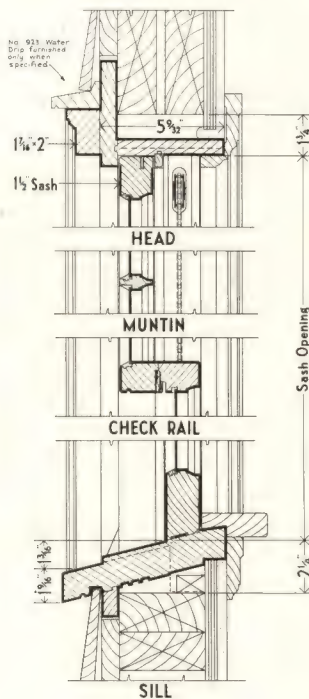
Detail shows a typical installation in frame wall with wood siding or stucco exterior. This same basic detail is also used in brick veneer and masonry walls with either inside plaster return or extension jambs.

NOTES

1. **EXTERIOR MOULDING**—Any Andersen brick moulding or casing may be substituted for the brick moulding shown or units can be furnished without exterior moulding on special order. When no exterior moulding is ordered, specify length of sill horns required. Water drip shown in detail furnished only when specified.
2. All inside finish stops, mullion and transom inside casing as shown on this detail are furnished as part of the unit. These parts are furnished in clear Pine unless otherwise specified. These can be furnished in other woods at an extra charge.
3. Finish moulding with screen rabbet shown in sill detail is for swinging sash only. For stationary sash the same moulding as shown at head and jamb is used at the sill.
4. **WEATHERSTRIP** as shown is furnished for all openings, applied to the head and sides of the frame and the bottom rail of the sash.

See following pages for stock sizes.

DETAIL OF *Andersen*
NARROLINE WINDOW No. 680



Detail shows Andersen Window No. 680 in frame wall construction with wood siding. This same unit is used without change in any type of wood frame, brick veneer, or masonry wall.

NOTES

1. Andersen Silver Seal Weatherstrip for complete opening furnished as standard equipment.
2. Special flat weights, pulleys, and galvanized sash chain, cut to length are included.
3. 1½" fitted sash furnished with check and bottom rail weatherstrip applied. Sash are glazed SSA bedded in putty. See list of stock sizes and layouts.
4. Exterior moulding No. 908, shown on detail, is standard on all frames. Any other Andersen brick moulding or casing furnished on special order. Water Drip No. 923 shown on head, brick moulding furnished only when specified.
5. Frame and Sash treated with Andersen Chemical Preservative.
6. Inside trim and finish hardware not furnished by Andersen.

NOTICE TO BUILDERS

If you apply sheathing before setting the frames, be sure to allow for the WEATHERTIGHT WIDE BLIND STOP. Set sheathing back at least one inch from the edge of the studding at the sides, two inches above the face of the header at the top and $1\frac{1}{4}$ inches from the bottom.

Andersen BASEMENT WINDOW

A COMPLETE UNIT INCLUDING

FRAME—Made of Clear Pine. Mortar clinch grooves provide anchorage and a weathertight joining with masonry wall.

SASH—Glazed and Factory Fitted. 1½ inches thick. Special design gives large glass area without sacrificing strength.

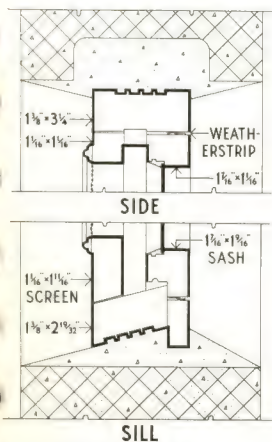
SCREEN—Factory Fitted. 18 mesh Bronze Screen Cloth. Installed in frame at factory.

HARDWARE—Hinges automatically hold sash securely in two open positions without rattling.

Lock closes sash tightly. Special inside screen fasteners can also be used for storm sash. All hardware parts are cadmium plated.

WEATHERSTRIPS—Compression type weatherstrips nailed in place on head and side of frame and bottom rail of sash.

STORM SASH—Furnished on order, factory fitted and with inside fasteners attached.

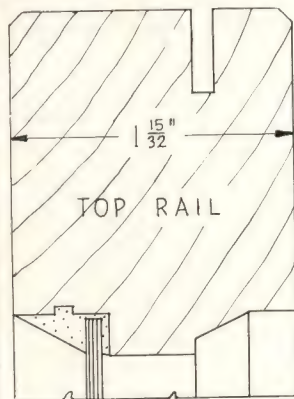


Sectional Detail

STANDARD SIZES

Glass Sizes	No. of Lights	Masonry Opening Size
10 x 12 in.	Two Light	2'-1" x 1'-5 3/4"
10 x 16 in.	Two Light	2'-1" x 1'-9 3/4"
12 x 16 in.	Two Light	2'-5" x 1'-9 3/4"
12 x 18 in.	Two Light	2'-5" x 1'-11 3/4"
12 x 20 in.	Two Light	2'-5" x 2'-1 3/4"
8 x 10 in.	Three Light	2'-5 1/4" x 1'-3 3/4"
8 x 12 in.	Three Light	2'-5 1/4" x 1'-5 3/4"
9 x 10 in.	Three Light	2'-8 3/4" x 1'-3 3/4"
9 x 12 in.	Three Light	2'-8 3/4" x 1'-5 3/4"
9 x 18 in.	Three Light	2'-8 3/4" x 1'-11 3/4"
9 x 26 in.	Three Light	2'-8 3/4" x 2'-7 3/4"
10 x 12 in.	Three Light	2'-11 1/4" x 1'-5 3/4"
10 x 14 in.	Three Light	2'-11 1/4" x 1'-7 3/4"
10 x 16 in.	Three Light	2'-11 1/4" x 1'-9 3/4"
10 x 18 in.	Three Light	2'-11 1/4" x 1'-11 3/4"
10 x 20 in.	Three Light	2'-11 1/4" x 2'-1 3/4"
12 x 18 in.	Three Light	3'-5 1/4" x 1'-11 3/4"

ANDERSEN CORPORATION, Bayport, Minnesota

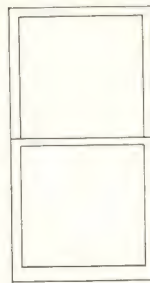


WINDOW DETAIL AND STOCK LAYOUTS

Andersen

NARROLINE DOUBLE HUNG WINDOW

OPENING SIZES FOR
ANDERSEN NARROLINE
WINDOWS - GLASS PLUS
4" IN WIDTH, GLASS PLUS
6" IN HEIGHT.
SEE TABLE OF SIZES FOR
RGH. STUDDING, OPENING, ETC.



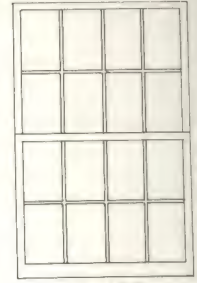
A-1211



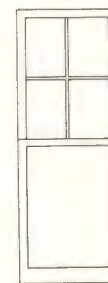
A-2444



A-3466



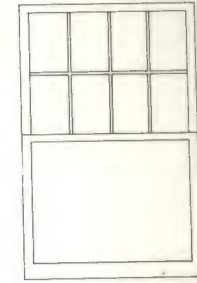
A-4488



A-1341



A-1361



A-1381



A-1221



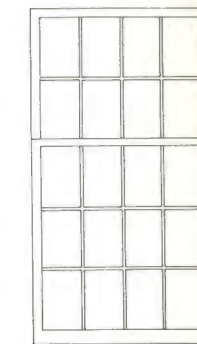
A-1231



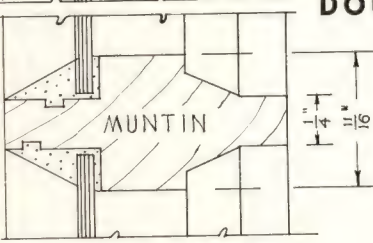
A-1241



A-3569



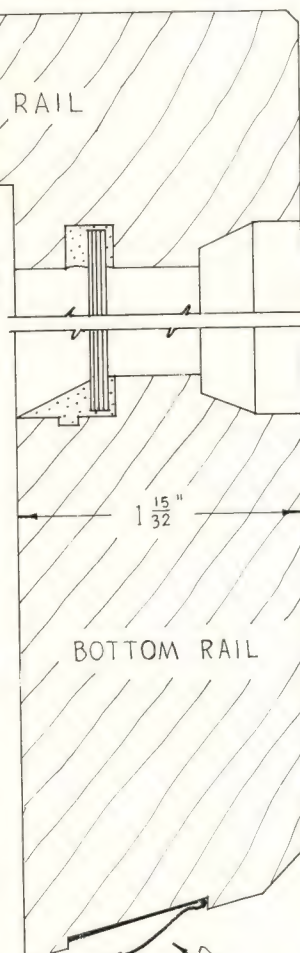
A-4582



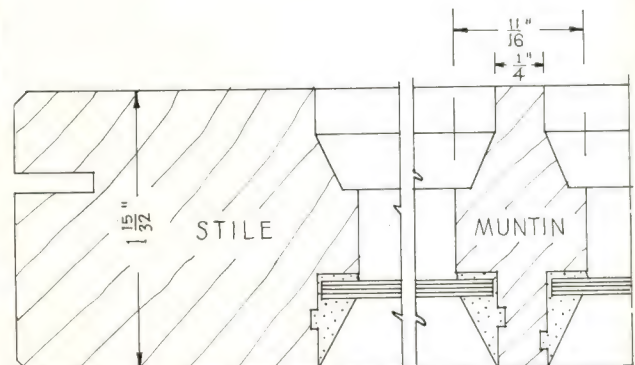
ANDERSEN THREE-MEMBER
SILVER SEAL CHECK RAIL
WEATHERSTRIP APPLIED
AT FACTORY.

FULL-SIZE CROSS-SECTIONAL
DETAIL OF THE
NEW *Andersen*
NARROLINE WINDOW
NO. 680.

NOTE
DETAIL SHOWS EXACT
WIDTH OF STILES AND
RAILS FOR 12 LT. AND 16 LT.
WINDOWS. THIS WIDTH
VARIES SOMEWHAT FOR
2 LT., 8 LT. AND DIVIDED TOP
WINDOWS.



SILVER SEAL BOTTOM
RAIL WEATHERSTRIP
APPLIED AT FACTORY.



Andersen Corporation

LIST OF STANDARD SIZES ANDERSEN NARROLINE WINDOW No. 680

OPENING SIZES †			A-1211	A-2444	A-3466	A-4488	A-3569	A-4582	DIVIDED TOP WINDOWS	
SASH OPG.	RGH. STUD. OPG.	MASONRY OPG.	GLASS SIZE	GLASS SIZE ‡	GLASS SIZE	GLASS SIZE ‡	GLASS SIZE	GLASS SIZE ‡	‡	
1- 8 x 3- 0	2- 1 x 3- 4	2- 0 x 3- 4 3/4		8 x 7 1/2					A-1341	
3- 6	3-10	3-10 3/4		9					A-1341	A-1221
3-10	4- 2	4- 2 3/4	16 x 20	10					A-1341	
4- 6	4-10	4-10 3/4	24	12						
4-10	5- 2	5- 2 3/4		13						
1-10 x 3-10	2- 3 x 4- 2	2- 2 x 4- 2 3/4		9 x 10					A-1341	
4- 6	4-10	4-10 3/4		12					A-1341	
4-10	5- 2	5- 2 3/4		13						
5- 2	5- 6	5- 6 3/4		14						
2- 0 x 2- 6	2- 5 x 2-10	2- 4 x 2-10 3/4	20 x 12	6 2/3 x 12 5/8						A-1231
3- 0	3- 4	3- 4 3/4	15	7 1/2					A-1361	A-1231
3- 6	3-10	3-10 3/4	18	9					A-1361	A-1231
3-10	4- 2	4- 2 3/4	20	10 x 10	10				A-1361	A-1231
4- 2	4- 6	4- 6 3/4			11				A-1361	A-1231
4- 6	4-10	4-10 3/4	24	10 x 12	12				A-1361	A-1231
4-10	5- 2	5- 2 3/4	26		13				A-1361	A-1231
5- 2	5- 6	5- 6 3/4	28	10 x 14	14				A-1361	A-1231
			30							
2- 4 x 3- 0	2- 9 x 3- 4	2- 8 x 3- 4 3/4	24 x 15	8 x 7 1/2					A-1361	A-1231
3- 6	3-10	3-10 3/4	18	9					A-1361	A-1231
3-10	4- 2	4- 2 3/4	20	10					A-1361	A-1231
4- 2	4- 6	4- 6 3/4		11					A-1361	A-1231
4- 6	4-10	4-10 3/4	24	12					A-1361	A-1231
4-10	5- 2	5- 2 3/4	26	13			8 x 10		A-1361	A-1231
5- 2	5- 6	5- 6 3/4	28	14					A-1361	A-1231
5- 6	5-10	5-10 3/4	30				8 x 12			
2- 7 x 2- 6	3- 0 x 2-10	2-11 x 2-10 3/4	27 x 12	9 x 12 5/8						A-1231
3- 0	3- 4	3- 4 3/4	15	7 1/2					A-1361	A-1231
3- 6	3-10	3-10 3/4	18	9					A-1361	A-1231
3-10	4- 2	4- 2 3/4	20	10					A-1361	A-1231
4- 2	4- 6	4- 6 3/4		11					A-1361	A-1231
4- 6	4-10	4-10 3/4	24	12					A-1361	A-1231
4-10	5- 2	5- 2 3/4	26	13			9 x 10		A-1361	A-1231
5- 2	5- 6	5- 6 3/4	28	14					A-1361	A-1231
5- 6	5-10	5-10 3/4	30				9 x 12			
2-10 x 2- 6	3- 3 x 2-10	3- 2 x 2-10 3/4	30 x 12	10 x 12 5/8						A-1231
3- 0	3- 4	3- 4 3/4	15	7 1/2					A-1361	A-1231
3- 6	3-10	3-10 3/4		9						
3-10	4- 2	4- 2 3/4	20	10					A-1361	A-1231
4- 2	4- 6	4- 6 3/4		11						
4- 6	4-10	4-10 3/4	24	12					A-1361	A-1231
4-10	5- 2	5- 2 3/4	26	13			10 x 10		A-1361	A-1231
5- 2	5- 6	5- 6 3/4	28	14					A-1361	A-1231
5- 6	5-10	5-10 3/4					10 x 12			
5-10	6- 2	6- 2 3/4		16						
3- 0 x 3- 0	3- 5 x 3- 4	3- 4 x 3- 4 3/4		8 x 7 1/2						
3-10	4- 2	4- 2 3/4	32 x 20	10					A-1381	A-1241
4- 2	4- 6	4- 6 3/4		11						
4- 6	4-10	4-10 3/4	24	12					A-1381	A-1241
4-10	5- 2	5- 2 3/4	26*	13			8 x 10		A-1381*	A-1241*
5- 2	5- 6	5- 6 3/4	28*	14					A-1381*	
5- 6	5-10	5-10 3/4					8 x 12			
3- 4 x 3-10	3- 9 x 4- 2	3- 8 x 4- 2 3/4		9 x 10						
4- 2	4- 6	4- 6 3/4		11						
4- 6	4-10	4-10 3/4	36 x 24*	12					A-1381*	A-1241*
4-10	5- 2	5- 2 3/4	26*	13			9 x 10		A-1381*	A-1241*
5- 2	5- 6	5- 6 3/4		14						
5- 6	5-10	5-10 3/4					9 x 12			
3- 8 x 3-10	4- 1 x 4- 2	4- 0 x 4- 2 3/4		10 x 10						
4- 6	4-10	4-10 3/4	40 x 24*	12					A-1381*	A-1241*
4-10	5- 2	5- 2 3/4	26*	13			10 x 10		A-1381*	A-1241*
5- 2	5- 6	5- 6 3/4		14						
5- 6	5-10	5-10 3/4	30*				10 x 12			
5-10	6- 2	6- 2 3/4		16						

† To maintain sash openings listed, the glass must be cut and the glass sizes shown are approximate.

* These items glazed DSA.

‡ To arrive at rough stud opening for multiple window, multiply sash

size and add 5" plus 2 3/4" for each mullion.

To arrive at masonry opening for multiple windows multiply sash size and add 4" plus 2 3/4" for each mullion.

§ These items with vertical muntin bars only.

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It has been stated that there is little lumber available as good as that produced 20 years ago. On the contrary, there is an abundance of good lumber, an outstanding example of which is Arkansas Soft Pine. The manufacturers of Arkansas Soft Pine have met the challenge created by the demand for better lumber values, by seeking new refinements and improvements through scientific research. In this progress, no greater strides have been made than in drying and seasoning . . . vitally essential in providing lumber which lasts and stays put.

With these achievements a fact, it now is customary to order Arkansas Soft Pine dried to specified moisture content suitable to atmospheric conditions in which the material will be used. Shrinking and swelling in the structure and in woodwork, built-in features and flooring have been thoroughly discounted. This seasoning is provided in thermostatically controlled steam kilns, unknown in early days, by which the natural moisture present in all lumber as cut from the log is removed through scientific application of steam, humidity and forced circulation of air. This method cures the wood, retains its original life and texture, and seals the wood cells against future absorption of moisture beyond a negligible amount.

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LITTLE ROCK, ARK.



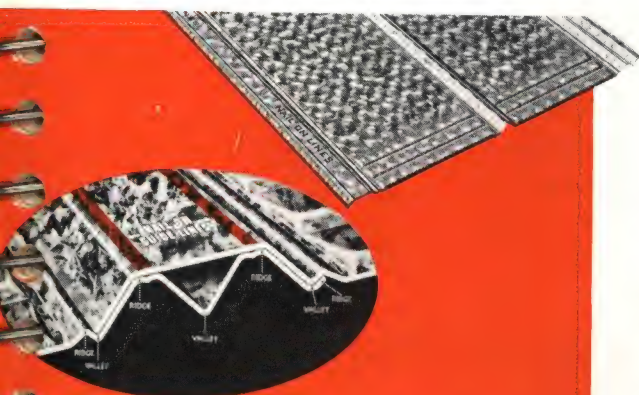
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MORE-DRAIN Channel ROOFING



SNAPTITE GUTTER

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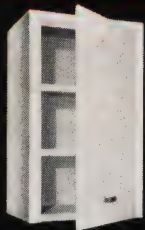
Cash in ON THE BIG DEMAND FOR STEEL KITCHEN CABINETS

● Today's big trend to modern, attractive and efficient kitchens has opened a new profit opportunity for dealers in steel base and wall cabinets. Berloy cabinets have all the features every home builder wants. They can be installed quickly and easily, and readily adapt themselves to any size kitchen — one cabinet at a time, or a complete installation.

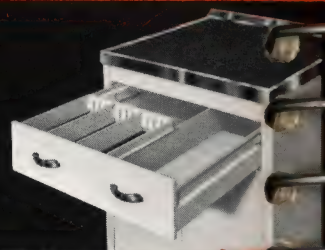
Beauty Berloy Cabinets are styled for kitchen beauty. They provide the distinctive appearance every woman wants. Nothing adds a more modern note for today's practical kitchens than beautiful Berloy base and wall cabinets.

Efficiency The utility of Berloy base and wall cabinets combined with their admirable beauty, bring words of enthusiastic praise from users. The many handy "built-in" conveniences save miles of steps. They have been carefully planned by experts on kitchen efficiency.

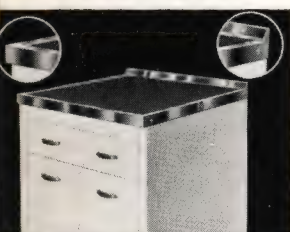
Permanency Berloy cabinets are constructed of electrically welded steel, reinforced skyscraper type. The perma finish white enamel is baked on, giving a lustrous appearance — it will not crack, chip or stain and is exceptionally easy to clean. This famous Berloy construction assures life-time service, real satisfaction and economy.



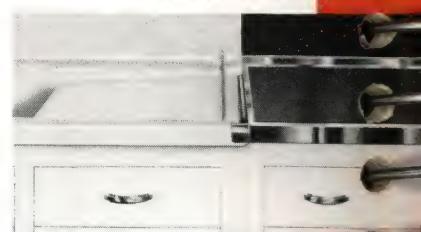
WALL CABINETS ARE ACCESSIBLE



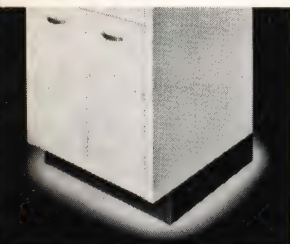
ADJUSTABLE CUTLERY TRAY



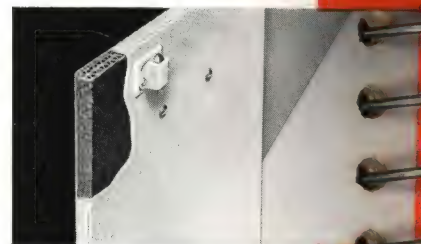
STAINLESS STEEL MOP RAIL AND LINOLEUM TOP



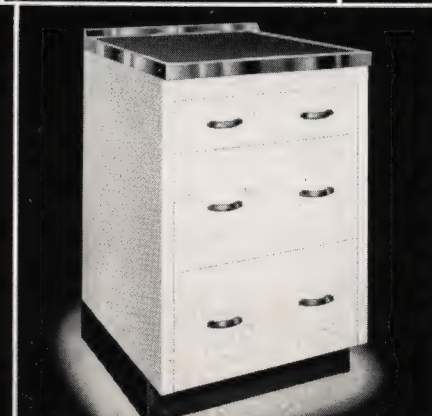
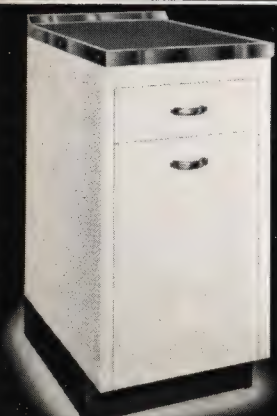
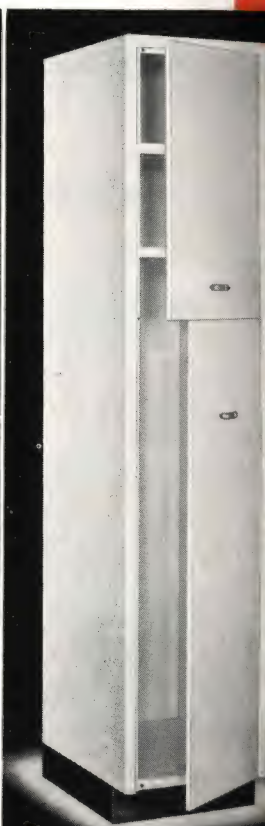
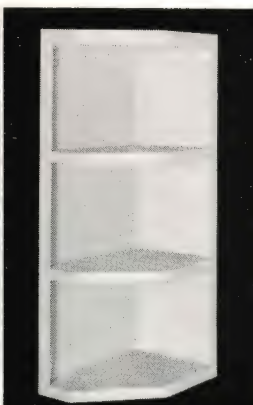
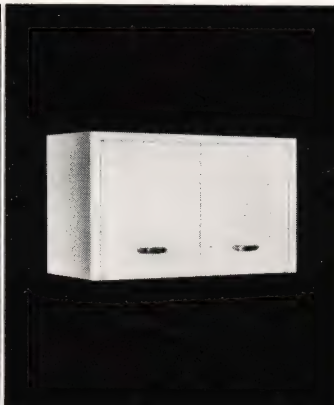
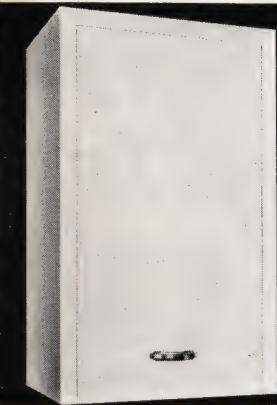
FILLER STRIPS

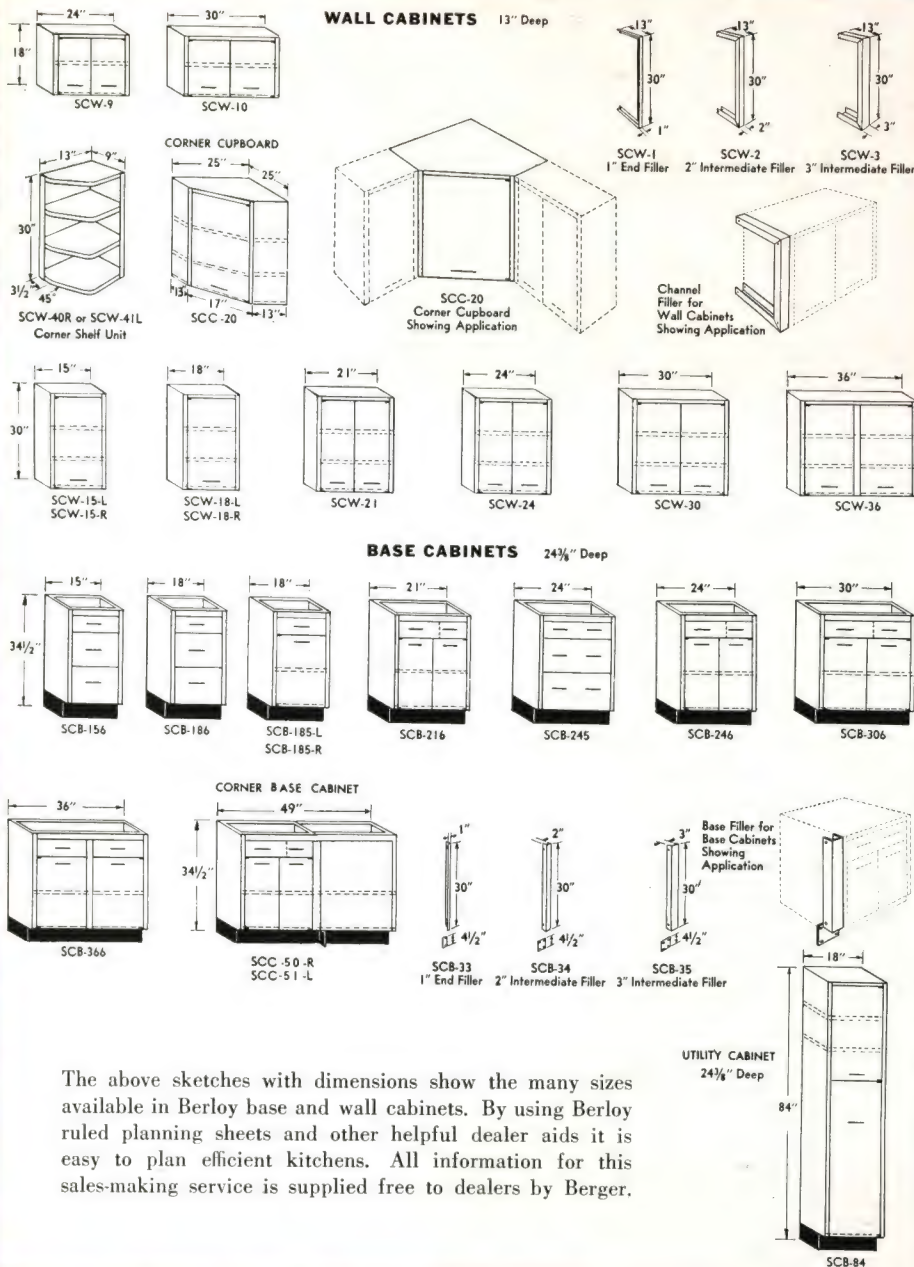


TOE SPACE



INSULATED DOORS AND DRAWERS





The above sketches with dimensions show the many sizes available in Berloy base and wall cabinets. By using Berloy ruled planning sheets and other helpful dealer aids it is easy to plan efficient kitchens. All information for this sales-making service is supplied free to dealers by Berger.

*It's Easy to Plan Many Combinations with **BERLOY** Cabinets . . .*

● By scientific planning it is possible to have a kitchen where work truly becomes a pleasure. Berloy base and wall cabinets provide convenient places for everything. They are work-reducing, time-saving, and fatigue-eliminating aids. When kitchen dimensions are known it is easy to sketch, on a Berloy ruled planning sheet, many different efficient kitchen arrangements with Berloy cabinets — this planning method helps dealers sell many cabinets.

BRANCHES IN THESE PRINCIPAL CITIES FOR YOUR CONVENIENCE

Baltimore
Birmingham
Boston
Buffalo
Chicago
Cincinnati
Cleveland
Columbus
Dallas
Detroit

Indianapolis
Kansas City
Los Angeles
Minneapolis
New York
Philadelphia
Pittsburgh
San Francisco
St. Louis
Toledo

Send **NOW FOR COMPLETE DETAILS ON THE DEALER HELPS MATERIAL—GET THE PROFIT STORY . . .**

● Berger has an interesting and profitable plan for dealers. It includes all types of forceful sales helps — catalog, mailing folders, etc. It enables you to get your share of the big business in steel base and wall cabinets when you put it in effect. Write today to Dept. "K" for the complete information.

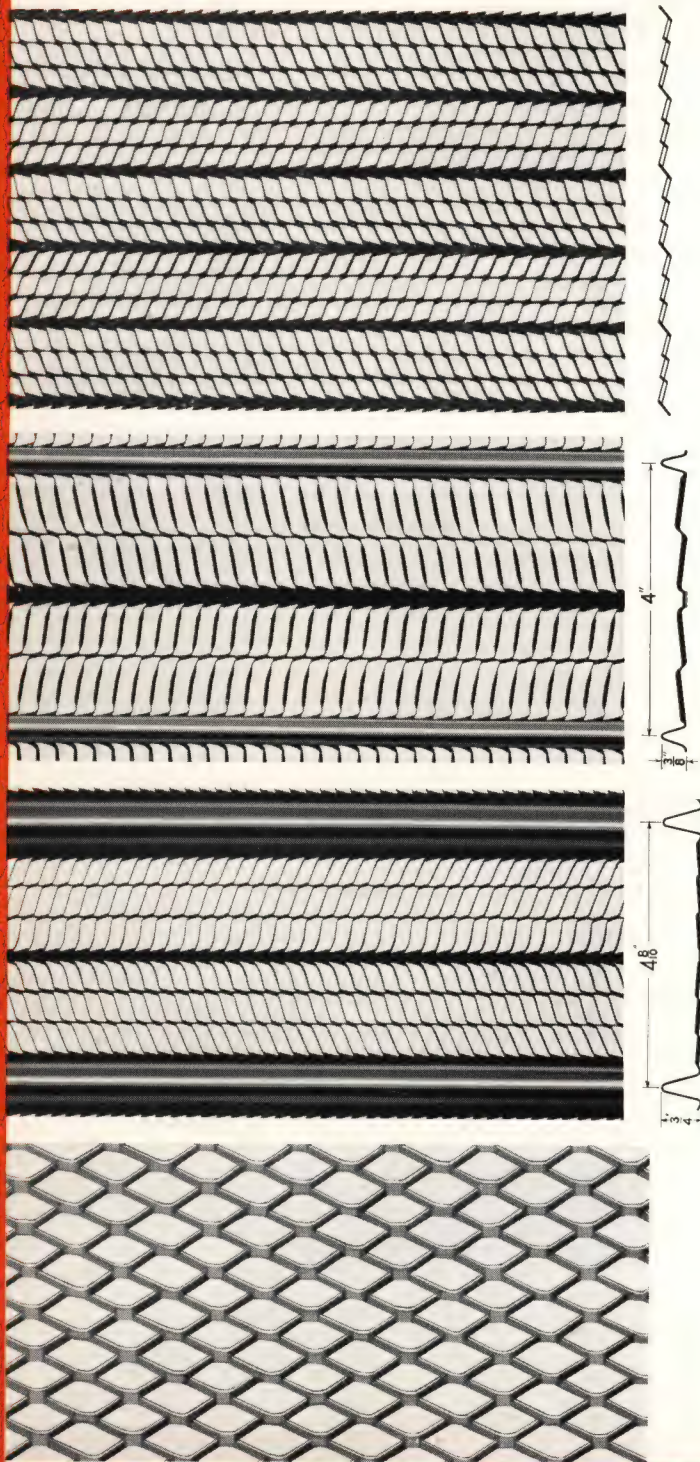


BERGER MANUFACTURING DIVISION REPUBLIC STEEL CORPORATION **CANTON, OHIO**



PLASTERING COMMODITY PRODUCTS --

● The Berloy Blue Label Line of metal lath and plastering commodity products are manufactured in the modern plants of the BERGER MANUFACTURING DIVISION, Republic Steel Corporation, long famous for fabricated metal products. Warehouse stocks of the complete line are carried for quick service in the cities listed below, which means complete customer satisfaction.



Metal Lath TO MEET ALL GENERAL PLASTERING NEEDS

● Every problem of plaster or stucco construction is met with Berloy metal lath. This type of construction has many recognized important advantages which modern builders are demanding.

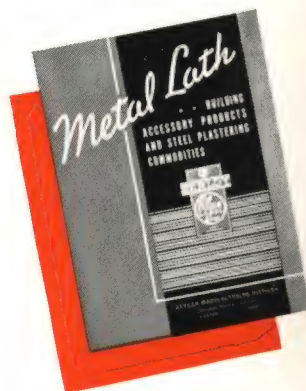
Fire Resistance — Tests show metal lath gives greatest resistance of all plaster bases.

Sound Resistance — Tests show that solid metal lath and plaster partitions are best for sound resistance.

Reinforcement — Tests show homogenous plaster construction obtained with metal lath, from one face through to the other, increases partition rigidity.

SEND FOR
Free
CATALOG

Write today to Dept "L" for the new Berloy metal lath catalog including building accessory products and steel plastering commodities.



WAREHOUSES AND BRANCH OFFICES IN THESE PRINCIPAL CITIES:—

Boston	Detroit	Springfield, Ill.
Chicago	Minneapolis	Springfield, Mo.
Cincinnati	New York	St. Paul, Minn.
Dallas	Philadelphia	St. Louis

BERGER MANUFACTURING DIVISION REPUBLIC STEEL CORPORATION **CANTON, OHIO**



Build BETTER HOUSES with *Carey* PRODUCTS

**ROOFS . . . SIDEWALLS . . . PARTITIONS . . . INSULATION . . . HEATING SYSTEM and PLUMBING
. FOUNDATION . . SIDEWALKS and DRIVES . . BATHROOM CABINETS and ACCESSORIES**

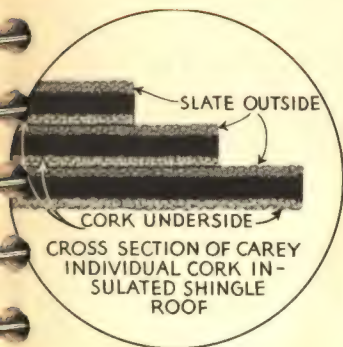
THE MODERN TREND is to the use of building products that add to comfort and permanence and **PAY THEIR WAY** in reduced upkeep. Wide-awake builders, contractors and dealers are capitalizing this trend by using, recommending and selling Carey Products.

Builders find that new homes and modernization jobs, incorporating these products, sell readily. Buyers know that much of the cost of Carey ma-

terials comes back to them in extra service, fuel savings and lower upkeep expense.

A number of Carey Products are exclusive—offer a more attractive margin—enable you to meet competition without sacrificing profits. Carey national advertising, directed through unique channels, is developing a vast number of new building and modernization leads—valuable business getters for builder and dealer.

ROOFS... CAREY CORK-INSULATED SHINGLES



. . . give two values at one cost. The asphalt shingle with outside mineral surface for weather protection; cork underside for insulation. The cork layer acts as a barrier to heat and cold; makes homes cooler in summer and warmer in winter. This effective roof insulation is automatically applied when the roof is put on, eliminating the extra cost of material and labor involved when separate roof insulation is used. Even where ceiling insulation is used, the extra insulation provided by the cork back shingles is valuable because of the natural tendency of heat to rise.



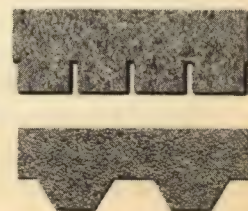
CAREY ASFALTSLATE SHINGLES - INDIVIDUAL

Made especially rugged to insure extra years of trouble-free service. A layer of colored mineral granules provides a beautiful and durable wearing surface. Full three-thickness coverage assures maximum roof protection. Made in a large variety of colors.



CAREY ASFALTSLATE SHINGLES - STRIP

Application cost cutters, Carey strip shingles, when applied, give practically the same appearance as individual asphalt shingles. Made in several sizes and weights to meet the various requirements of service and costs. Available in a variety of colors.



ROOFS... *Careystone* ASBESTOS-CEMENT SHINGLES



Made of the imperishable materials, Asbestos Fibre and Portland Cement, Careystone Shingles actually increase in toughness upon exposure to the elements. They are fireproof, weather-proof and rot-proof—permanent as stone and, in appearance, give a faithful reproduction of wood grain.

CAREYSTONE STRIP SHINGLES IN "TRI-TONE" BLENDS

This is a new asbestos-cement, strip shingle that automatically gives individual shingle effect. When applied, even by unskilled men and without special supervision, the roof will present a perfect blend of color tones, without bunching or patterning. Available in "Tri-Tone" Blends of Green, Gray and Autumn (red, brown and straw).

Application is simplified because there are only 80 pieces to the square, and only one storm anchor and two nails are required per piece. The corners and butts lay flat; there is no warping, no moisture infiltration and no chattering in wind.

CAREY ROLL ROOFINGS BUILDING PAPERS AND FELTS

A complete line of ready-to-lay, Roll Roofings—in various weights and finishes—in a price range to meet every need, from the smallest temporary shed to the more permanent building. Carey Waterproof Building Papers keep out dampness, grit, wind—insuring a more comfortable home. Available in various types and weights to meet practically every need in modern home construction.

SIDEWALLS... *Careystone* ASBESTOS-CEMENT SIDING

- | | | |
|--------------------------------------|------------------------------------|--------------------------------|
| 1. Low first cost | 4. Requires No Paint Protection | 8. Will not rot or deteriorate |
| 2. Distinctive, beautiful appearance | 5. Fireproof and wear-proof | 9. Will not curl |
| 3. Minimizes upkeep expense | 6. Makes the home warmer in winter | 10. Termite Proof |
| | 7. Cooler in summer | |

OLD COLONY DUO-EDGE No. 210

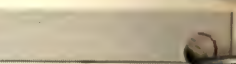
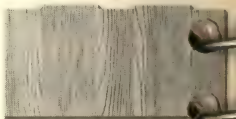
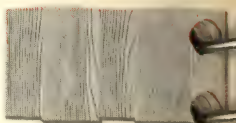
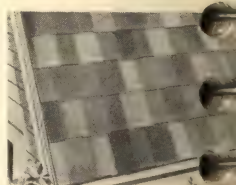
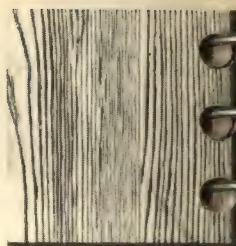
This is a double edge unit, made with thatch butt on one edge and wave line, on the other. When laid with one edge exposed, it presents the distinctive broken lines of thatch butt shingles laid in random widths. By exposing the other edge, a very pleasing wave line is secured. A unique treatment may be achieved by using both the wave line and thatch butt exposures on the same building.

DUO "8" SIDING

This is a double edge unit, made with thatch butt on one edge and a straight line on the other. May be laid with either edge continually exposed, or alternated. Affords almost unlimited opportunity for planning distinctive exterior wall treatment. Ten or more separate and unusual patterns may be developed by combining this unit with the wider Old Colony Siding. In the manufacture of this siding, special care is given to the arrangement of the grain—to bring out the effect of random width, individual shingles.

COLONIAL CLAPBOARD SIDING

Readily adaptable to almost every type of frame design. A pleasing contrast is achieved when Colonial Clapboard Siding is used in conjunction with other types of Careystone Siding Units, in upper story or gable end treatment.



PARTITIONS... *Careystone* ASBESTOS-CEMENT WALLBOARD

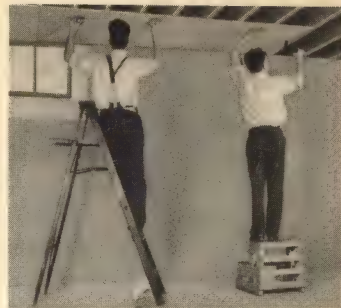
Made of asbestos fibres and Portland Cement. Ideal for use on walls, ceilings, panels and partitions. Can be nailed (without drilling) direct to wood studs. Furnished in an attractive buff color which makes a neat finish, or may be painted or papered. Makes an excellent fire stop when used on basement ceiling. Available in 3/16", 1/4" and 3/8" thicknesses and in standard size sheets 48" x 48" and 48" x 96".

CAREYSTONE FLAT ASBESTOS SHEATHING

A board made of asbestos and cement—fireproof and weather-proof—suitable for interior and exterior use. Becoming increasingly popular for use in place of stucco in dormers and other places in home construction. Furnished in the natural color of the materials from which it is made. The color is permanent and will not discolor upon exposure to the elements. May be drilled and sawed with ordinary tools. Available in any size up to and including 48" x 96", in thicknesses from 1/8" to 2", inclusive.

SCORED ASBESTOS-CEMENT WALLBOARD

... is the same base material as Careystone Wallboard, except that each sheet is scored in 4" x 4" squares to provide a tile effect. Widely used for lower sections of walls in kitchens, bathrooms, breakfast rooms. Makes a beautiful tile appearance at a great saving in labor and material cost. Furnished in maximum size sheets 48" x 96".



FOUNDATION...

CAREY PLASTIC WATERPROOFING COMPOUND

This is a fibrous black cement which is troweled on to the outside of the foundation walls, forming a tough and thick adhesive layer. Used where building is in low, heavy or soggy ground, where greater protection is needed than is afforded by the liquid Percoproof Coating. Applied to outside of basement wall only.



HEATING SYSTEM and PLUMBING.. *Careycel* INSULATION

Other coatings for damp-proofing and waterproofing include: Carey Percoproof for application to outside of walls and Percoproof Plaster Bond applied with a brush directly to the walls.

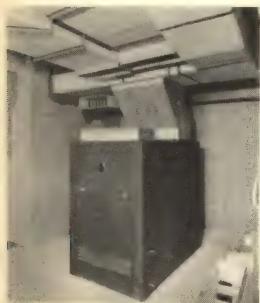
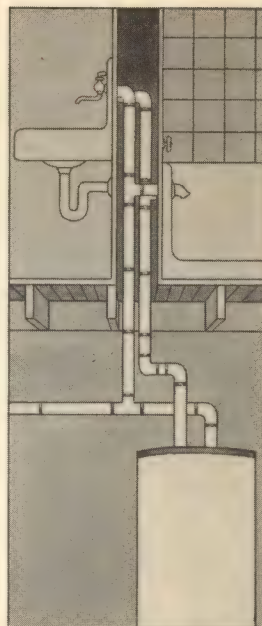
Careycel Asbestos Insulation is an exclusive, patented Carey Product, developed especially for hot water and steam heating systems. Impartial tests, made by a leading testing laboratory, demonstrated a 30% reduction in heat loss over the air cell type of covering ordinarily used. Put Careycel over all pipes leading from boiler to radiator; cover boiler with Careycel Asbestos Blocks. The savings in fuel will pay for the insulation and continue to pay dividends in fuel saved, year after year.

A CAREY TANK JACKET KEEPS HOT WATER HOT

Cover the hot water heater with a Carey Tank Jacket. The water will heat quicker and stay hot longer. The pipes leading from water heater to kitchen and bathroom allow the hot water to cool. Cover these pipes with Careycel Insulation and keep the water hot, right up to the faucets. This will save money on water and gas bills; give more hot water when you want it.

CAREY PERFECTO PIPE COVERING FOR COLD WATER LINES

Cold water lines usually run parallel to hot water lines through the walls to bathroom and kitchen. These pipes are warmed by the adjacent hot water pipes and it is usually necessary to run the cold water for some time to get it cool enough to use. Cover cold water lines with Carey Perfecto Covering—have cool water right up to the faucets—reduce water bills.



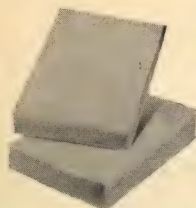
Careyduct ASBESTOS INSULATED DUCT

If air conditioning is included in the new home, use Careyduct—the modern asbestos insulated duct. Careyduct is fireproof; permanent; will not rust or decay; hushes fan noises; insures uniform high efficiency in the whole duct system. Size for size, Careyduct is cheaper than insulated metal. Easily erected.



INSULATION...

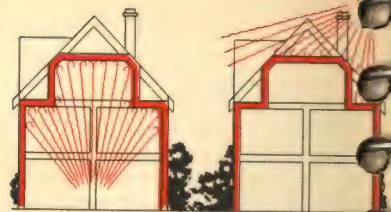
Carey
ROCKTEX



CAREY ROCKTEX is the modern Rock Wool Home Insulation. A 4-inch thick blanket of Rocktex installed in the walls and ceiling is as efficient in stopping the flow of heat as a solid brick wall about five feet thick.

Fuel savings are definite because Rocktex stops the loss of heat. Rocktex also effects important savings in reducing the size of the heating unit required to heat an uninsulated building. The saving in cost of the heating plant has, in many cases, paid for the insulation.

Provides maximum control of room temperature the year 'round. Will not shrink, rot or burn. Vermin and termite proof. Effects fuel savings that normally return its cost in a few years. Produced in Bat, Wool and Granulated form, to meet all installation conditions in old or new homes.



SIDEWALKS and DRIVES.. EXPANSION JOINT

Variations in temperature cause concrete work to expand and contract. To prevent breakage and cracks due to this expansion and contraction, Carey Elastite Expansion Joint should be used in all concrete work around the house. Carey Expansion Joint is available in two types:

- Standard Asphalt Joint consisting of two layers of felt between which is interposed an asphaltic composition.
- A sponge rubber type of joint that is resilient. When compressed by the expansion of concrete, it will not extrude.



BATHROOM CABINETS and ACCESSORIES



MIAMI equipped bathrooms, the "beauty spots" in modern homes, help sell houses. Buyers are favorably influenced by the extra quality and utility of MIAMI Bathroom Cabinets and Accessories. Over 140 cabinet models from low cost housing types to DeLuxe ensembles.

TUBULAR LIGHT BRACKETS

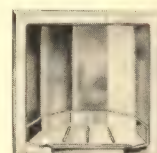
MIAMI Cabinets are fitted with attractive tubular light fixtures that bring new beauty to the bathroom and save money on installation costs. Only one electrical outlet is required in the bathroom and this should be in the top of the wall-opening provided for the cabinet.

The cabinets are completely wired at the factory and the fixtures, the switch and electric convenience plug are mounted on the cabinet.

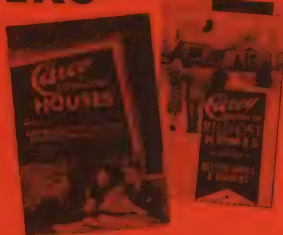
MIAMI CHROMIUM BATHROOM ACCESSORIES

are supplied in both recessed and projection types. They are made of forged brass, heavily nicked, then covered with hard chromium. A unit for every modern bathroom requirement.

THE PHILIP CAREY COMPANY, LOCKLAND, CINCINNATI, OHIO



**SEND FOR FREE FOLDERS
OF "CAREY EDITION OF
BILDCOST HOUSES" and
"CAREY LOW-COST HOUSES"**



THE PHILIP CAREY COMPANY
Lockland, Cincinnati, Ohio

Please send details of your house plan services and how they may be applied to our business.

Name.....

Street Address.....

City..... State.....

Win-Dor

CASEMENT window HARDWARE

THE CASEMENT HARDWARE CO.
401 N. WOOD ST., CHICAGO, ILL.



The Hardware is the thing!

The most important thing in determining the success of casement windows is the hardware. Any sash can be made to fill an opening but only correctly engineered hardware can make it a convenient and efficient operating unit, and only quality built hardware can assure continuous trouble-free operation for the life of the building.

Modern wood casement windows equipped with Win-Dor hardware swing outward . . . do not interfere with shades, curtains or drapes. They take light-weight, snug-fitting inside screens and storm sash. Open and close with the turn of a crank. Automatically lock at any set position . . . give any degree of ventilation up to and including *full* size of window opening.

Win-Dor hardware is lifetime hardware, honestly built in every detail . . . oversize $\frac{3}{4}$ " naval bronze worms, machine-cut heat treated gears, patented sash channel . . . all points of superior construction and design. Finished to meet any hardware specification, Win-Dor hardware is never brought down to a price, yet, it is not expensive for the cost is based on large scale production economies founded on *minimum quality requirements of material and workmanship*.

Win-Dor is the *only* complete line of casement window hardware.

Use and specify Win-Dor with confidence.

These advantages are the result of proper casement operation and control:

CONVENIENT OPERATION



INSIDE CLEANING



INSIDE SCREENS AND STORM SASH



You can provide no greater convenience for the home owner . . . the housewife than windows over the kitchen sink which open and close easily *without reaching*. Here is one place in the house where a window is really functional and where conveniently operated casements can be a definite sales feature. The Win-Dor hardware shown in these pages provides casements with this advantage for *any* window that is hard to reach.

With Win-Dor extension cleaning hinges which project the sash 4" away from the frame, when open, the outside surface of the glass may be cleaned from the inside of the room. What woman would not be delighted with this advantage? It is another big selling point for it eliminates the old-fashioned terrifying job of sitting outside on the sill to do a *weekly* housekeeping chore.

The modern, safe and convenient way of screening windows and double-glazing them for winter fuel saving is the casement way; from the inside. The advantages of this method are obvious. It is clean. It is convenient. It eliminates the hazardous ladder climbing twice a year to install and remove screens and storm sash from the outside. Win-Dor hardware is the "key" to these window advantages plus automatic locking, automatic top control and mechanical operation which never interferes with shading and draping.

★ The hardware marked with a star (*) in this guide table and illustrated and briefly described in these pages is available from stock from your jobber or wholesaler or from the factory direct. The other hardware shown and the complete line of Win-Dor hardware is completely described in the Win-Dor catalog which you should have on file. Write for it today.

GUIDE FOR OPERATOR SIZES AND COMBINATIONS

In this table are listed the various sizes of sash and the operators best suited for them with suggested hinge and locking device combinations. Any of the operators indicated will also work satisfactorily on smaller sizes of sash. All are designed with a large safety factor.



SPECIFY WIN-DOR

at each of these points:

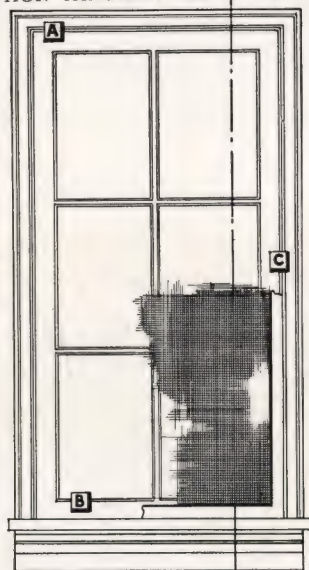
A Here is where casements do not always close. Use Win-Dor automatic top closers for bringing them in snug and to overcome warping.

B Win-Dor offers five different operators in this catalog. They provide positive and convenient control at the stool.

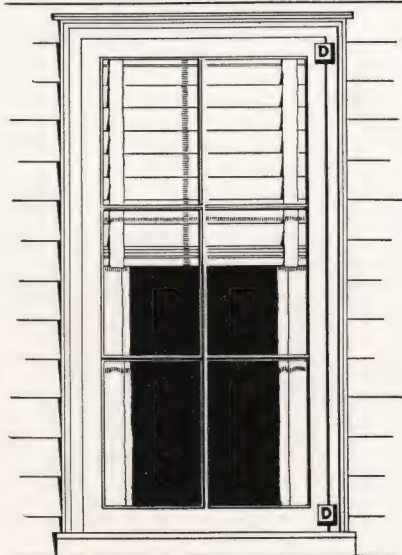
C Where manual locking at the center of the sash is desired, use Win-Dor locking handle. It does not interfere with screens.

D The weakest spots in casement sash are the corners. Reinforce them with Win-Dor close or extension corner-bracing hinges.

SECTION THROUGH "aa" — a



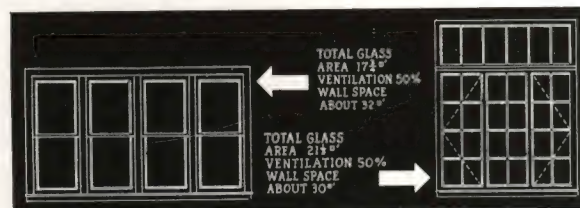
INSIDE ELEVATION — a



OUTSIDE ELEVATION

SIZE OF SASH	OPERATOR		CORRELATED Hinges and Locking Devices
	Close Hinges	Extension Hinges	
 Sash up to 8 Lights or Equal to 6 Square Ft. in Area	SERIES 16	SERIES 29	With No. 762 or No. 752 hinges use No. 45 top closer, No. 48-8 Snugger or No. 800 locking handle.
	SERIES ★ 30	SERIES 35	With No. 762 or No. 752 hinges, No. 45 top closer or No. 48-8 Snugger.
	SERIES 29	SERIES ★ 30	With No. 762 or No. 752 hinges, No. 45 top closer, No. 48-8 Snugger or No. 800 locking handle.
	SERIES 29		With No. 762 hinges, No. 45 top closer or No. 800 locking handle.
	SERIES ★ 30		With No. 762 close hinges, No. 45 top closer or No. 800 locking handle.
	SERIES ★ 26	SERIES ★ 26	With No. 762 or No. 752 hinges, No. 45 top closer or No. 800 locking handle.
	SERIES 35		With No. 762 close hinges, No. 45 top closer.
	SERIES ★ 26	SERIES ★ 26	With No. 762 or No. 752 hinges, No. 45 top closer or No. 800 locking handle.
	SERIES 33		With No. 762 close hinges, No. 45 top closer and No. 800 locking handle.

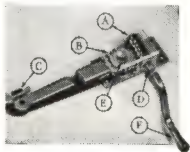
ILLUSTRATING THE SPACE SAVING ADVANTAGES OF CASEMENTS IN USABLE WALL AREAS



As the above diagram shows, with casement sash properly arranged as a unit of fixed lights and vents you can save many lineal feet of useable wall space that would be taken up by double-hung windows of the same glass area. This is an important factor especially in the small home where space is always limited.

IT ALL DEPENDS ON Win-Dor THE HARDWARE YOU USE

Every Win-dor operator has these exclusive features; points of unequaled superiority.



A The best material obtainable where the strain is greatest; large $\frac{3}{4}$ " naval bronze worm.

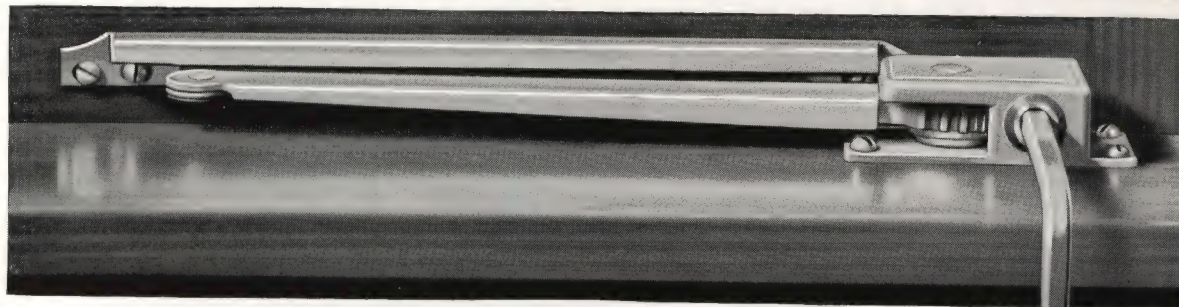
B Strength where it is needed. Heat treated machine cut gear $\frac{1}{4}$ " thick, interlocked without rivets to the arm.

C Rustless spring bronze tension spring for smooth sliding in the channel.

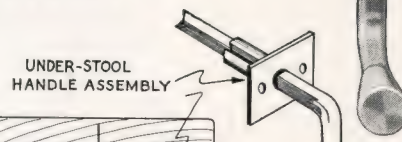
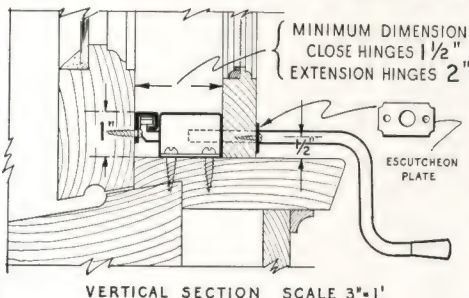
D Special section steel or brass handle stock. $\frac{5}{16}$ " with $\frac{3}{4}$ " worm bearing seat.

E Bronze bushing for pivot. Arm is solid in the housing.

F Solid brass roller knobs on handles.



Win-Dor Series 26 Operator

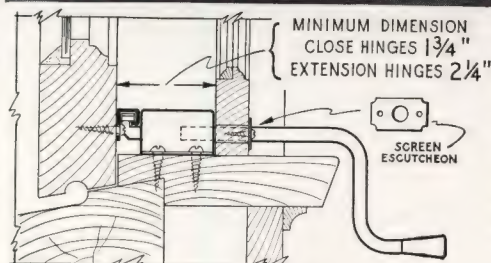
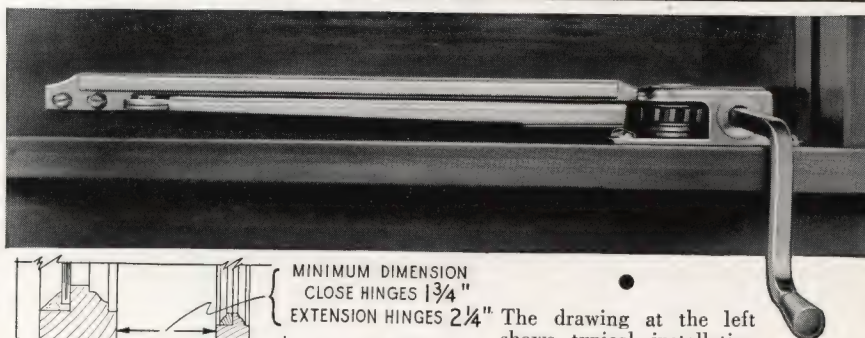


These details (left) show typical installation methods for Series 26 Operator. On stool thru-screen and under stool concealed.

• Over a quarter of a million of these life-time Win-Dor Series 26 Operators are in use today proving the merit of this standard reversible operator. It is strong. It is durable. It will meet the most critical specification. Equipped with the patented Win-Dor sash channel it may be used without change of any kind for either right or left hand sash. Handles are available in any length. Both handles and operators may be had in solid brass and are furnished to order in any standard hardware finish.

Win-Dor Series 30 Operator

Of quality construction like all Win-Dor operators, Series 30 operator illustrated at the right and Series 16 operator (not shown, but similar and lower in price) have been designed for narrow frames. Installed with close hinges or standard butts it permits a minimum dimension between sash and screen of $1\frac{1}{2}$ ". With extension hinges it is 2". Win-Dor Series 30 and 16 operators are ideal for casement installation in the small low-priced home where a smaller operator than Series 26 is sufficient.



The drawing at the left shows typical installation of Series 30 operator working through the screen. Wood or metal screens may be used, the latter with a filler strip, or, operator may be installed below the stool as above.

Win-Dor Series 29 Operator

This operator is of the angle-drive type, a design especially suited for use on wide window stools. Long, projecting handles are eliminated providing sash control in a compact unit of neat appearance. Screen or inside storm sash is notched for the case which, with the handle is made of die-cast zinc alloy. Square steel shaft of handle has strong internal worm seat. Worm and gear is the standard Win-Dor construction. This operator is not reversible. Installation details are shown on the right with measurements for use in conjunction with Win-Dor hinges and Top-closers. See also guide table opposite for other combinations of correlated hardware.

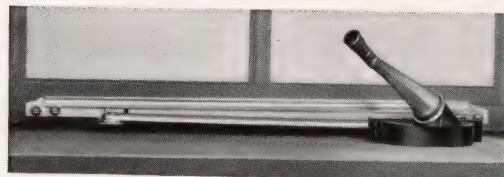
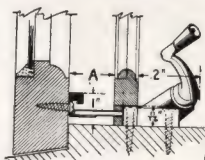
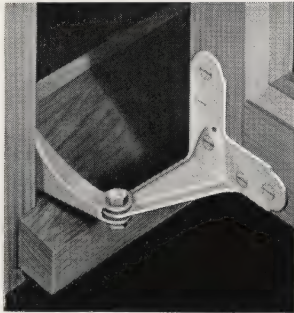


Illustration shows Operator on stool with screen removed.

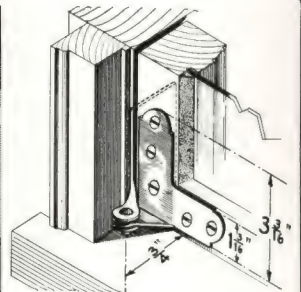
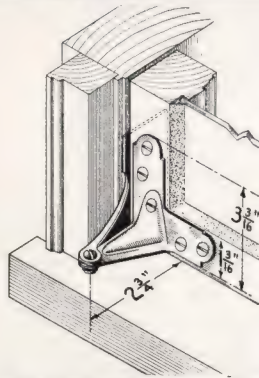


1" IS MINIMUM
1 1/2" IS STANDARD FOR USE WITH SERIES 45
1 3/4" IS STANDARD FOR . . . 800
2" IS MAXIMUM FOR . . . 75
3" IS MAXIMUM FOR . . . 76



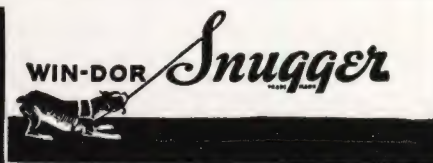
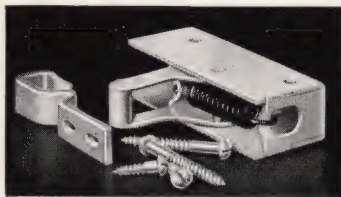
Win-Dor Series 75 Extension Cleaning Hinges

Designed and engineered to provide wood casement sash with the best and most convenient hinge, the extension feature permits a space of 4" between the sash and the frame when the window is open at 45 degrees. This is ample space for reaching out and washing the outside surface of the glass from within the room. The frame leaf, wide for strong bearing is mortised in and the sash leaf has right angle bearing for the greatest possible strengthening of the sash at the corners, where most strain occurs at the joining of rail and stile. As shown on measured drawing only $2\frac{3}{4}$ " projection is beyond sash which is reduced considerably by frame mould or other outside trim.



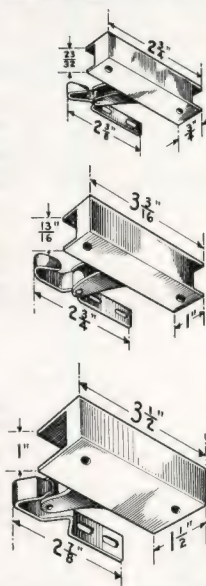
Win-Dor Series 76 Close Hinges

This corner bracing close hinge is far superior to common butts for hanging casement window sash. They reinforce the sash at the point of greatest strain, permit easy swinging with operator control and weatherstripping, are bronzed bushed and like Series 75 Hinges may be had with either loose pins or of the friction type. These hinges will withstand 200 lbs. downward pressure per pair. Have 12 square inches of attaching surface.



Series 45 Win-Dor Snugger is the large size automatic Top-Closer for casement windows. This device acts as invisible hand which actually reaches out and pulls in the window at the top to overcome and prevent warping, to make the sash snug and weathertight against weatherstripping. The illustration above shows Series 45 Snugger which may be had in two spring tensions (8 or 10 lb. pull). Series 48 Snugger is the middle size with two spring tensions (6 or 8 lb. pull). This size is recommended for light casements.

Snugger is also widely used for automatic door closing. Series 45 and Series 48 are especially adaptable to combination storm and screen doors, to inside closet doors (saving cost of lock set where pulls are sufficient) and to large size cupboard doors.



Win-Dor Snugger Series 47

This is the new automatic latch for cabinet doors, a remarkably efficient positive catch which always works, never gets out of order, has a four pound pull and may be attached easily and quickly at the top, at the bottom, vertically along the side or horizontally under any shelf. No mortising is required for any Snugger although they may be set into frame stops if desired. The device is simple, consisting of housing and keeper attached with four screws.

NOW • • WIN-DOR EQUIPPED, PRE-FIT WOOD CASEMENT UNITS

Now lumber and building supply dealers can cash in on new pre-fit casement windows fully equipped with Win-Dor Hardware. These profitable units, made up in fast-selling, "over-the-counter" sizes are 100% quality products—are made of the best treated lumber, are fitted with new non-jam, non-leak weatherstripping, and, are fully equipped with genuine Win-Dor Hardware . . . yet are remarkably low in price because they are manufactured on a volume production basis.

Look for the *Win-Dor equipped* pre-fit casement window units. It is your easiest and surest way to tell a quality line. (Names of manufacturers furnished on request.)

VAPORSEAL and INSULATE at Little or No Extra Cost with **CELOTEX**

REG. U. S. PAT. OFF.

VAPOR-SEAL SHEATHING AND LATH

W. W. NORRIS, President, The Walter Norris Company, Chicago, says, "Because Celotex Insulation builds, vapor-seals, and insulates at one cost, I will duplicate this home, in the Chicago area, and the cost of complete Celotex insulation will be only \$93.30."

OR EXAMPLE

THIS NEW 6-ROOM HOUSE CAN BE

Completely Insulated for only \$93³⁰ NET

**This New 6-Room Home
was Completely Insulated for
only \$85.00 net.**

W. T. NAGLE, *builder*, of Saginaw, Michigan, writes:

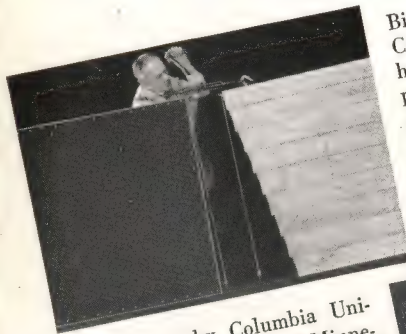
"Celotex Vapor-seal Sheathing on all exterior walls with $\frac{1}{2}$ " Celotex Vapor-seal Lath as direct plaster base for all outside walls and 1" Celotex Lath on second floor ceilings cost approximately \$85.00.

"... the results were highly satisfactory . . . It was evident that the cost of fuel, which was gas, was materially reduced, and the comfort secured was extremely favorable and warrants the additional expense involved."

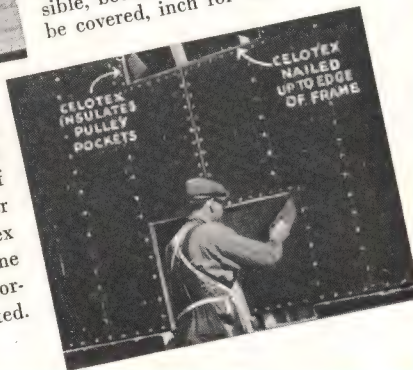


WHY CELOTEX VAPOR-SEAL SHEATHING

Gives you more than Ordinary Sheathing



Big, cane fibre, rigid boards of Celotex Vapor-seal Sheathing handle easily, go up fast, stay put. All windows are insulated up to the edge of the frame, including pulley sockets—a place ordinarily left open to some wind infiltration. No skimping is possible, because all wall areas must be covered, inch for inch.



Official tests by Columbia University, The University of Minnesota, and R. W. Hunt Co., have proved conclusively that a wall of horizontal wood sheathing, under equal pull with a wall of Celotex Sheathing, will move out of line while the wall of Celotex Vapor-seal Sheathing is not distorted.

DOES 3 JOBS

At One Low Cost . . .

1 PROVIDES NEEDED STRUCTURAL STRENGTH

2 PROVIDES EFFECTIVE VAPOR SEAL

3 PROVIDES EFFICIENT INSULATION

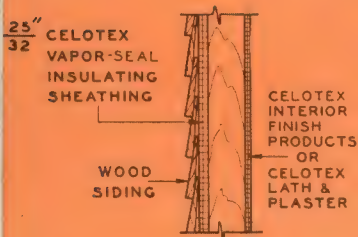
And It's GUARANTEED IN WRITING for the Life of the Building

• Ordinary sheathing provides mainly structural strength. Celotex Vapor-seal Sheathing gives you more than ordinary sheathing because it *does 3 jobs* at one cost! It provides needed structural strength (see photo of test at left). Its asphalt-and-aluminum coating acts as an effective vapor barrier, now demanded by science. And it *also* gives you insulation of proved efficiency to keep your house warmer in winter and cooler in summer.

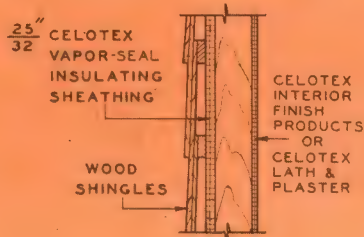
Furthermore, Celotex Vapor-seal Sheathing is permanently protected against termites and dry rot by the exclusive, patented Ferox Process—and *guaranteed in writing for the life of the building!**

*When issued, applies only within the boundaries of Continental United States.

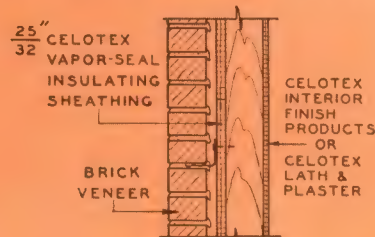
ADAPTABLE TO ALL TYPES OF CONSTRUCTION



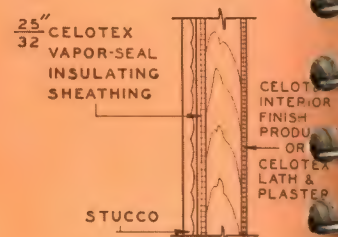
For wood siding exterior finish, Celotex Vapor-seal Sheathing replaces wood sheathing. Nailing directly to studs, apply siding directly over Celotex Sheathing by nailing through to studs.



For shingle exterior finish, application of Celotex Vapor-seal Sheathing is identical except that furring strips are applied over Celotex Sheathing, nailed through to studs, and shingles are applied on furring strips.



For brick or stone veneer, nail Celotex Vapor-seal Sheathing to studs. Nail ties for brick or stone work through Celotex Sheathing to studding. Lay brick or stone in usual manner.



On stucco houses apply Celotex Vapor-seal Sheathing to studding. Apply waterproof building paper, and an approved stucco base, in accordance with stucco specifications.

WHY CELOTEX VAPOR-SEAL LATH *Gives you more than Ordinary Lath*

DOES 3 JOBS

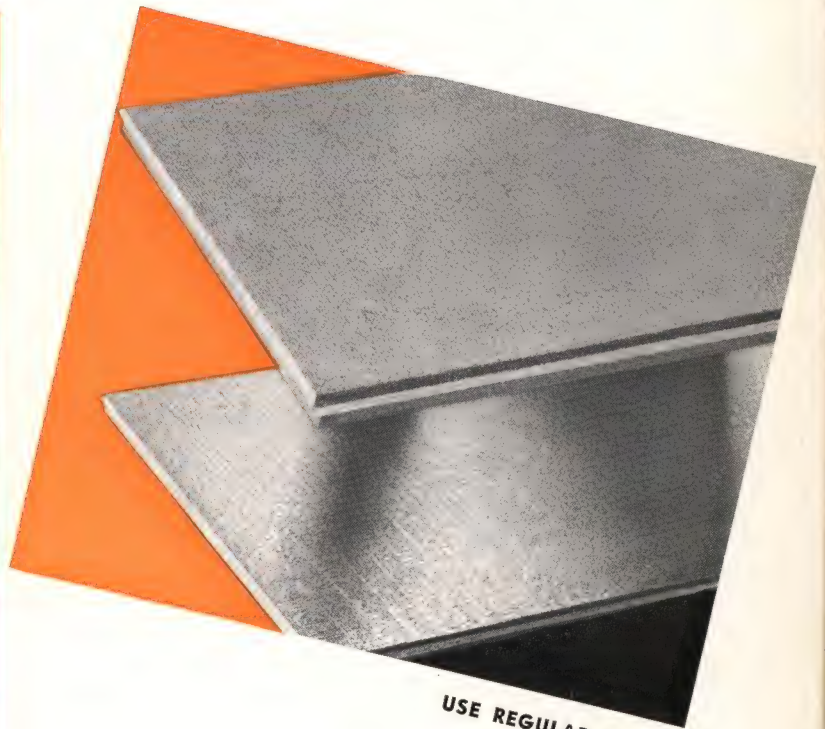
At One Low Cost . . .

- 1 **PROVIDES IDEAL PLASTER BASE**
- 2 **PROVIDES EFFECTIVE VAPOR SEAL**
- 3 **PROVIDES EFFICIENT INSULATION**

*And It's GUARANTEED IN WRITING
for the Life of the Building**

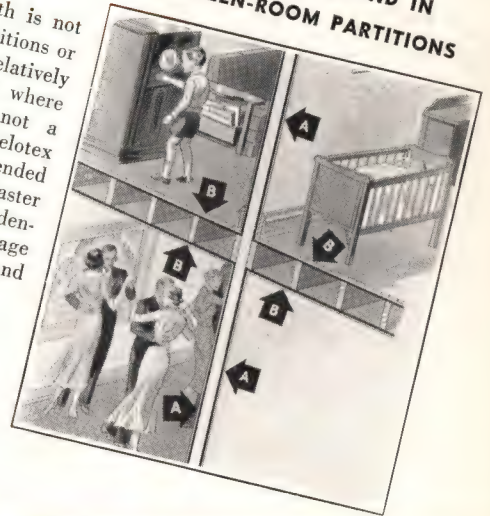
Ordinary lath is intended to serve only one purpose—plaster base. Celotex Vapor-seal Lath gives you more than ordinary lath because it *does 3 jobs* at one cost! It gives you an ideal plaster base, insuring plaster permanently free from lath marks, and with more than adequate bonding power. (See illustration below.) At the same time it provides the needed vapor seal to check moisture travel into the wall space—and the proved insulation value for which Celotex cane fibre products are famous.

Also, Celotex Vapor-seal Lath is permanently protected against termites and dry rot by the exclusive, patented Ferox Process—and *guaranteed in writing for the life of the building!**

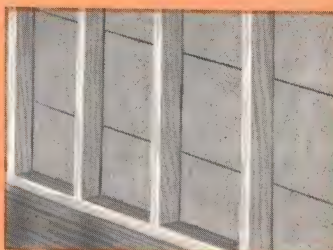


**USE REGULAR CELOTEX LATH
TO DEADEN SOUND IN
BETWEEN-ROOM PARTITIONS**

Celotex Vapor-seal Lath is not required for inside partitions or in climates that are relatively warm the year around where vapor condensation is not a problem. Here Regular Celotex Insulating Lath is recommended for its excellence as a plaster base, and for its sound-deadening effect, retarding the passage of sound through walls and ceilings.



Ordinary lath marks as on this wall are likely to appear when ordinary wood lath is used. Heat leaked through the plaster strips, causing dust to accumulate and ruining the appearance of wall and ceiling surfaces.



When Celotex Lath is used there is no plaster exposed at the back—you have a continuous insulated wall that keeps the plaster beautiful and saves money by reducing fuel costs.



Be sure to use one-inch Celotex Vapor-seal Lath on top-floor ceilings, as this extra insulation is needed to retard heat losses through the roof, to save fuel, and to protect against summer sun.

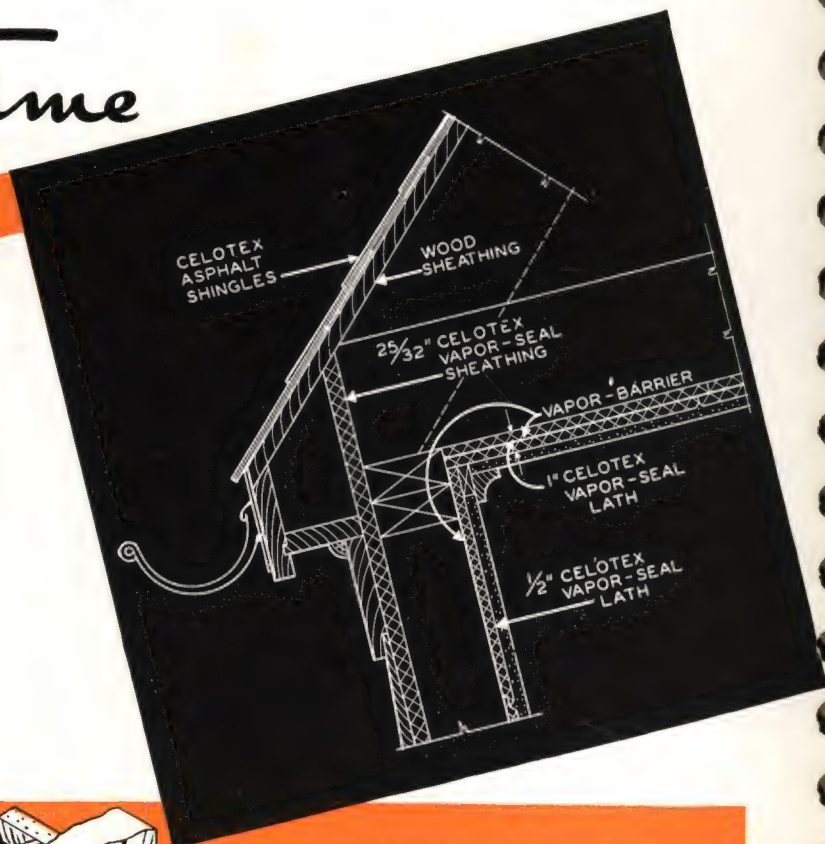


The patented beveled edge of Celotex Lath (both standard and Vapor-seal) gives diagonal plaster reinforcement around each lath. The bond between plaster and Celotex Lath can withstand a pull of over 800 lbs. per square foot.

Here's the Modern Way to get Insulation and Vapor Protection! *at the Same Time*

Countless tests have proved (and a million users have verified the proof) that Celotex cane fibre board provides efficient insulation—and that it's economical, too, *because it replaces other materials and pays for itself out of fuel savings.*

Furthermore, Celotex was the first manufacturer to incorporate an effective vapor seal with insulating sheathing and insulating lath. Now or at some later time you can add humidification or complete winter air-conditioning with perfect confidence that the Celotex Vapor-seal Sheathing and Vapor-seal Lath, used in the walls of your house as recommended, provide the vapor barrier which scientists today insist is necessary. Moisture-proof coatings on both products give you permanent protection against harmful moisture condensation within walls!

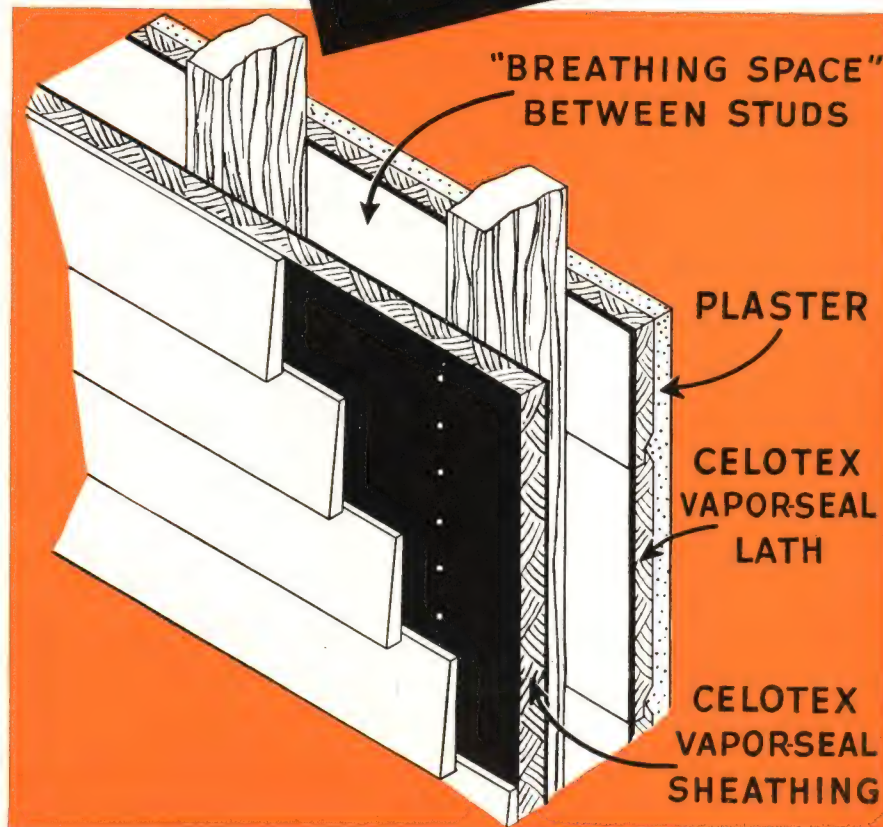


Use 1" Vapor-seal Lath In All Top-Floor Ceilings

For outer walls, where Celotex Vapor-seal Sheathing is used, half-inch Celotex Vapor-seal Lath is sufficient. But for top-floor ceilings, one-inch Celotex Vapor-seal Lath should be used—for extra insulation against winter heat loss and summer sun.

Vapor-seal Lath Not Needed Where Air Is Not Humidified

If you are not providing winter humidification in your home, and have no humidifier, you will not need to use Celotex Vapor-seal Lath. In such a home regular Celotex Insulating Lath is recommended—in the outer walls for insulation, and on between-room partitions for its sound-deadening effect, retarding the passage of sound from one room to another.

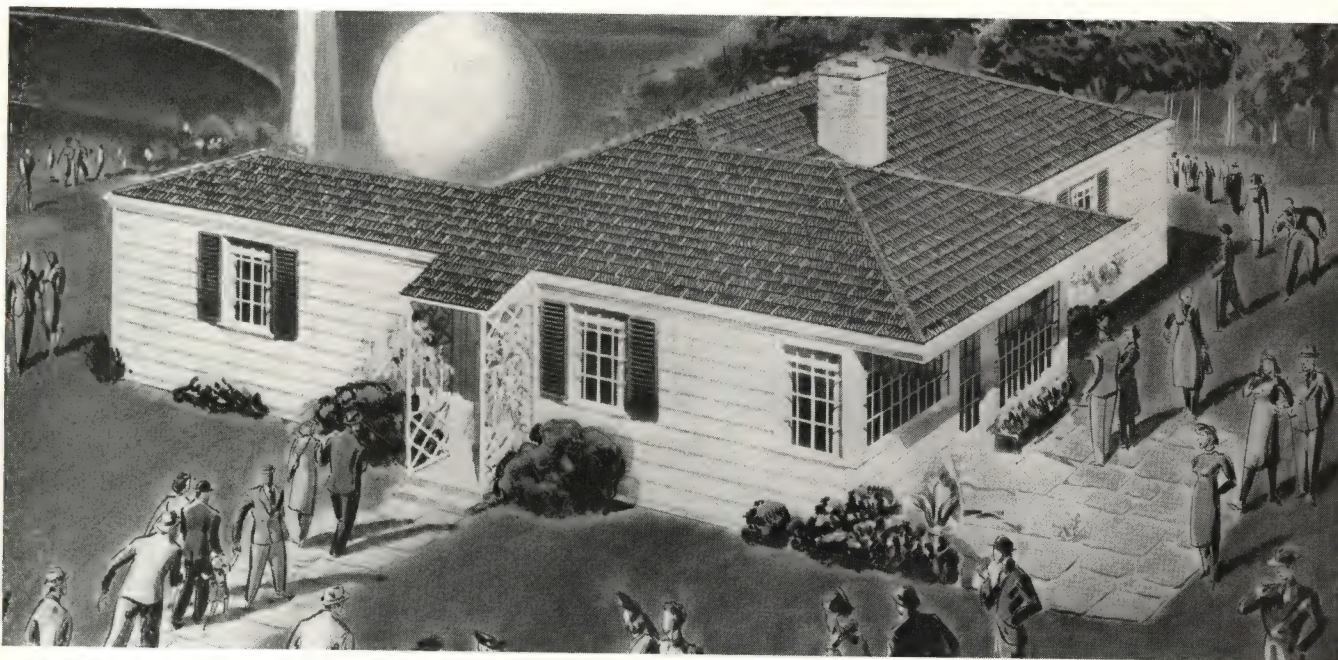


THE CELOTEX CORPORATION
919 N. MICHIGAN AVENUE
CHICAGO, ILL.

Certain-teed

REG. U.S. PAT. OFF.

WOOD-TEX SHINGLES



Demonstration Home No. 1, New York World's Fair 1939 With Its Roof of Green Blend Wood-Tex Shingles

Unique beauty, greater weight, extra weather protection, fire-resistance, and economy are outstanding features of the Wood-Tex Shingle, Certain-teed's contribution to the beauty of the Number One Demonstration House at the New York World's Fair—1939.

Architects and builders choose Wood-Tex Shingles for their deep-textured grain and their wide, heavy shadow lines. This special graining is obtained by starting with an extra thick and heavy shingle, and then *building up* the grain. The result is not only graining of great beauty, but also a shingle with extra rigidity, extra weight, and extra protection on the exposed portion.

In many localities homes with this type of roof take a better insurance rate than those roofed with inflammable material.

In Wood-Tex Shingles you can offer prospective home purchasers colorful, textured roofs, with greater fire-resistance and greater protection against weather, at the same price as less distinctive shingles.

APPLICATION DIRECTIONS

NEW ROOFS: Use dry, well-seasoned tongue and groove lumber for the roof deck. Use asphalt roofing or asphalt saturated felt under these shingles to insure a longer lived roof. Asphalt roofing or asphalt saturated felt should overlap all joints at least 2".

DRIP COURSE: Start with full shingle with the slots pointing upward and the straight edge slightly

projecting over the drip edge. Asphalt Mineral Surfaced Roofing 12" wide may also be used for the drip course.

FIRST COURSE: Cut out one half of first panel on left end of shingle. Start with the largest portion of the cut shingle. Proceed with full shingle. **SECOND COURSE:** Start with full shingles. **THIRD COURSE:** Same as first course.

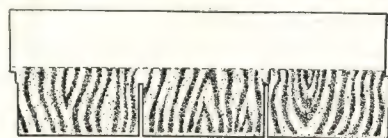
FOURTH COURSE: Same as second course. Shingles to be laid left to right, placing shingles no more than $\frac{1}{8}$ " apart. Do not butt shingles together.

IMPORTANT: Be sure all nails are placed in thick part of shingle. Nails should be placed $\frac{3}{4}$ " above cut out, driven straight down, heads flush with shingle surface. No nails should be exposed. Use $1\frac{1}{8}$ " Galvanized nails for new work, $1\frac{3}{4}$ " Galvanized nails for old work.

EXPOSURE: Shingles are to be exposed 5" to the weather.

For more detailed instructions, follow directions packed in each bundle of shingles.

SPECIFICATIONS



Size.....	12" x 36"
Approx. Weight	
per sq.....	260 lbs.
Bundles per sq.....	3
Slabs.....	80
Exposure.....	5"
Head Lap.....	2"

Colors: Gray blend, green blend, red blend, blue blend, brown blend. Not available on the Pacific Coast. Substitute 15"x36" Certain-teed Thick Butt Shingles.

QUALITY MADE *Certain*
SATISFACTION GUARAN-*teed*

MORE HOUSE FOR THE MONEY

The use of C-S-I (Certain-teed Structural Insulation) enables builders to offer fully insulated houses at little or no increase in cost. Certain-teed Structural Insulation products are double- and triple-purpose products. Insulation value is combined with other functional uses such as sheathing, plaster base and interior finish.

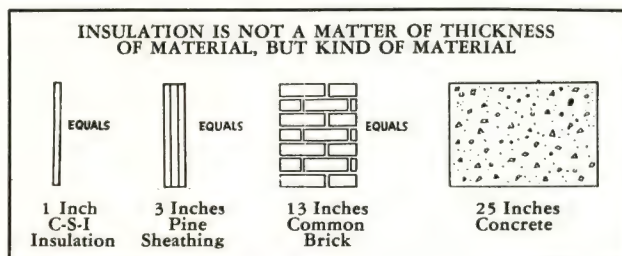
The diagrammatic house at the right illustrates the use of C-S-I Asphalted Sheathing, C-S-I Interior Finish, and C-S-I Insulating Board. At the bottom of this page is illustrated C-S-I Asphalted Key Lap Lath with plaster being applied.

All C-S-I products are made of bagasse (cane fibres). In addition to the tiny air cells in the fibres, millions of dead air spaces are trapped in the body of the material by Certain-teed's Cane Weave Process, making this board a highly efficient insulation. Furthermore, this process hooks and weaves the jagged bagasse fibres into a tightly knit, rigid board of great structural strength. Finally, Certain-teed Structural Insulation is termite proofed and dry rot proofed under patented Ferox Process license.

For all its superior features C-S-I costs no more than ordinary insulation.

C-S-I Structural Insulation products are easy and economical to apply, and, once in place, C-S-I Structural Insulation *retains* its insulating value, year after year without need of replacement.

The savings in fuel plus extra dividends in the way of increased comfort (and in beauty of walls and ceiling if C-S-I Interior Finish is used) makes the full use of C-S-I in all the parts of the home indicated in the illustration at the right, an investment that homeowners cannot afford to overlook, and ones which builders include in their jobs to insure client satisfaction.



Certain-teed
C-S-I
ASPHALTED
SHEATHING

For effective insulation that calls for a vapor barrier, too, use C-S-I Asphalted Sheathing. Stronger than ordinary wood sheathing nailed diagonally, it goes on quickly, lasts indefinitely, and is economical because the one product serves as insulation, sheathing *and* vapor barrier. . . . Light and

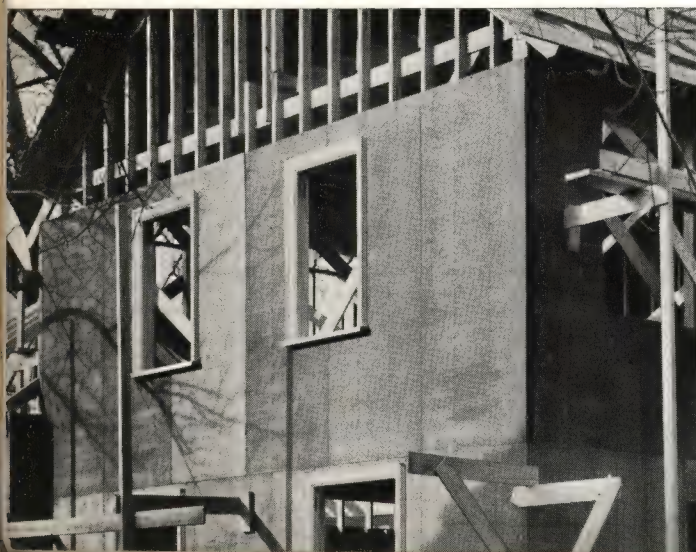
rigid, with asphalt coating on sides and all edges, plus aluminum on one side.

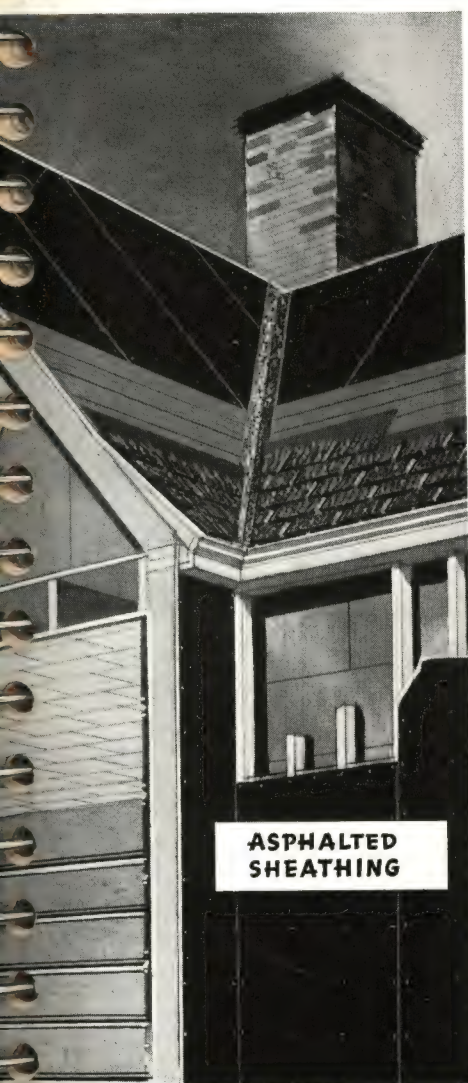
C-S-I Asphalted Sheathing—25/32" thick, 4' wide, 7' to 12' long.

Certain-teed
C-S-I
ASPHALTED
KEY LAP LATH

Use insulation on both outside and inside walls. Inside C-S-I Key Lap Lath or C-S-I Asphalted Key Lap Lath serves as plaster base *plus* insulation. Key Lap Lath provides a strong plaster bond. The patented Key Lap feature provides continuous insulation plus a mechanical key which reinforces the plaster at the joint. The asphalted type also serves as a vapor barrier on the warm side of the studs where it is needed.

Furnished in a standard size 18"x48" and 1/2" or 1" thick. C-S-I Key Lap Lath (plain) is also available 3/4" thick.





The Modern Well Insulated House Demands the Following Material Specifications

I. Exterior Wall Sheathing — C-S-I Asphalted Sheathing, 25/32" thick, 4' wide, length suited to job, shall be used on all exterior walls and roof rafters and applied in accordance with manufacturer's published instructions.

II. Plaster Base — (a) C-S-I Key Lap Lath (1/2"x18"x48") (3/4"x18"x48") (1"x18"x48") shall be used as plaster base on all interior walls, and applied in accordance with manufacturer's published instructions, or

(b) C-S-I Asphalted Key Lap Lath (1/2"x18"x48") (1"x18"x48") shall be used as plaster base on all interior walls, and applied in accordance with manufacturer's published instructions.

III. Interior Finish — (a) C-S-I Structural Insulation (1/2" thick, 4' wide, length suited to job) (1" thick, 4' wide, length suited to job) shall be used and applied in accordance with manufacturer's published instructions in the following locations: (NOTE: List locations where material is to be used.)

C-S-I Structural Insulation is furnished in 4', 5', 6', 7', 8', 8 1/2', 9', 9 1/2', 10' and 12' lengths.

(b) C-S-I Finish Plank of the size, color and finish shown in the drawings, shall be used on interior walls, and applied in accordance with the manufacturer's published instructions: (NOTE: List locations where material is to be used.)



(c) C-S-I Tile Board (Cane Fibre) of the size, color and finish shown in the drawings, shall be used on all ceilings, and applied in accordance with manufacturer's published instructions.

APPLICATION — For full details of application see direction sheet packed with materials or write to Certain-teed Products Corporation, 100 E. 42nd Street, New York, N. Y., or its nearest sales office.

Certain-teed C-S-I STRUCTURAL INSULATION

The standard insulating board, useful in a thousand places and particularly adapted to interior finish uses. Strong but light, easy to handle, easier still to cut and fit, C-S-I meets architects' specifications . . . pleases men on the job . . . saves money at the start and goes on cutting fuel bills year after year. Made in three attractive finishes, Natural,

Ivory and Brown Burl, it needs no further decoration but lends itself readily to decorative treatments if desired.

Furnished in standard board 1/2" and 1" thick, 4' wide, 4' to 12' long. 3/4", 1/2", and 2" thicknesses on special order.

Certain-teed C-S-I TILE BOARD

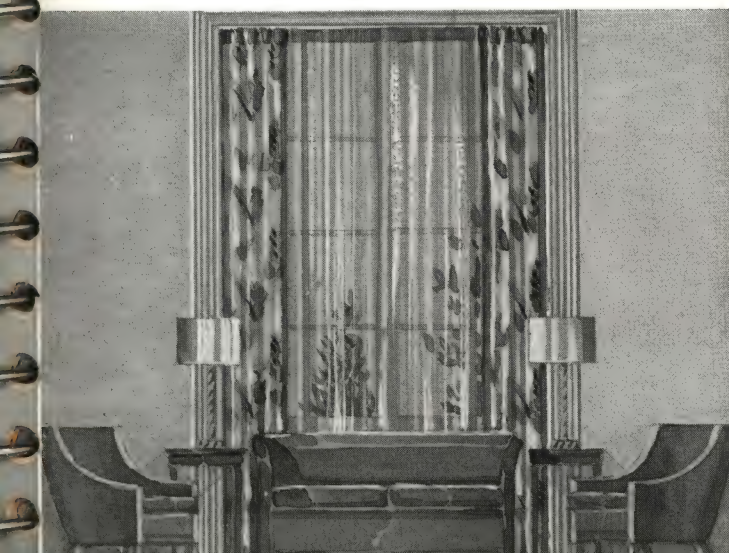
C-S-I Tile Board and Finish Plank build and insulate as they decorate . . . give you attractive interiors of year 'round comfort, yet these extra advantages instead of costing you more, actually save you money. Adding insulation as you decorate eliminates extra material, extra application costs . . . three colors, three distinctive textures. Ideal for remodeling as well as new work.

Plank—1/2" thick, 6" to 16" wide, 8' to 12' long.

Tile (small)—1/2" thick, 12"x12" to 24"x24".

Tile (large)—1/2" thick, 16"x32" to 24"x48".

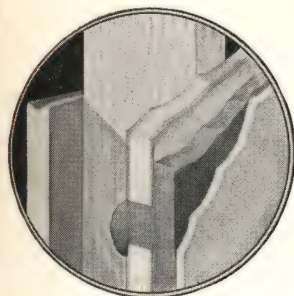
All available 1" thick on special order only.



FIRE-PROTECTING WALLS OF GYPSUM SHEATHING, LATH AND PLASTER

Gypsum is unique as a fire-retardant. It not only refuses to burn or support combustion, but it refuses to permit high temperatures to pass through it, thus giving protection to the wood members to which it is secured. For the greatest possible fire-safety with the ordinary type of construction, use gypsum products on *both* exterior and interior walls.

Outside, Beaver Gypsum Sheathing gives you the advantage and economies of frame construction *plus* fire-



Beaver Gypsum Sheathing on the outside plus Gypsum Lath and Plaster on the inside—the right combination for strong fire-resisting walls.

Beaver Perfolath For Strong Fire-Resisting Walls

Tests prove Beaver Perfolath when used on walls qualifies for a one-hour fire rating. Beaver Perfolath holds plaster (1) by a natural bond with its specially prepared surface, (2) by mechanical key furnished by the $\frac{3}{4}$ " holes in which the plaster "keys" itself through holes and "mushrooms" at back of lath.

Where a one-hour fire rating is not specified, Beaver Gypsum Lath (plain or insulating) provides a smooth economical plaster base for strong crack-resisting walls

resistance . . . protection for the members to which it's applied.

Its large sheets, $\frac{1}{2}$ " thick, 24" wide and 8' long are quick and economical to apply. It cuts cleanly, and nails easily. A strong water-resisting paper is used on the surface. The snug-fitting tongue and groove edge stops wind infiltration, and saves fuel.

SPECIFICATIONS: Sheathing shall be $\frac{1}{2}$ " Beaver Gypsum Sheathing applied horizontally across the studs in accordance with the manufacturer's published directions.

and ceilings. Tests show its strong plaster bond. It cuts cleanly without waste, is quickly and easily applied and will not warp, buckle, expand or contract.

SPECIFICATIONS: Plaster base shall be Beaver Perfolath (Beaver Gypsum Lath) (Beaver Insulating Gypsum Lath) $\frac{3}{8}$ " thick, 16"x48" (or 16"x32") applied in accordance with the manufacturer's published directions. (NOTE: List locations where material is to be used.)



Plastering over Beaver Perfolath

"PLASTISIZED" PLASTER WINS FIRM FRIENDS

"Plastisizing"—Certain-teed's exclusive process—makes an easy-working plaster, takes the "drag" out of the plasterer's job, helps keep work on time. "Plastisized" plaster always carries the full measure of sand, and cuts droppings way down. Builders like its good

covering capacity, too. Homeowners like the strong, smooth walls it helps to build.

"Plastisized" plaster may be obtained in the Beaver, Certain-teed, Acme or Agatite brands.

SPECIFICATIONS: All base coat plaster shall be Certain-teed "Plastisized" plaster in one of the following brands. Beaver, Certain-teed, Acme or Agatite.



FOR WALLS YOU CAN DECORATE WITHIN 24 HOURS — BESTWALL

Bestwall is the Original Gypsum Wallboard. It is quick and easy to apply—ready to decorate within 24 hours—no delays while waiting for walls to dry. Use it in remodeling. Use it in new construction. Bestwall provides strong permanent walls protected against fire.

There are kinds of Bestwall for every job. Shown at the right there are four finishes—each with its own special advantages.

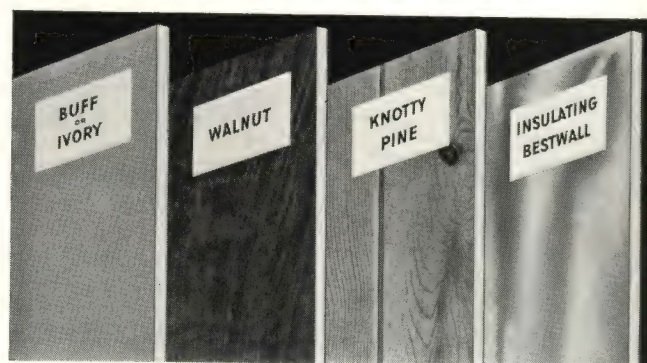
With Recessed Edge Bestwall, use the Bestwall Reinforcing Joint System for concealed joints as strong as the board itself. The result—smart-looking walls and ceilings. No wonder this type of construction is being more and more widely specified.

Square Edge Bestwall gives you the choice of two colors—Buff or Ivory. It can be supplied with nailing marks to tell workmen where to nail to hit the studs. No other gypsum wallboard offers these two advantages.

Wood Grain Bestwall is available in two types—American Walnut and Knotty Pine. In each, you get the beauty of genuine wood grain plus the strength and fire protection of gypsum rock.

You can get Insulating Bestwall with a shining metal-foil back. It provides insulating value with Bestwall's structural strength. Bestwall comes in sheets 48" wide and ceiling-high lengths.

FINE WALLS OFFERED BY MANY KINDS OF BESTWALL



At right—cross section of joint showing Recessed Edge Bestwall.



At right—cross section of joint showing Square Edge Bestwall.



CERTAIN-TEED PRODUCTS CORPORATION

100 EAST 42nd STREET

NEW YORK, N. Y.



Architects and Contractors

PAINTING SPECIFICATIONS

for

Products of CHICAGO PAINTS, INC., Chicago



NEW INTERIOR WOODWORK & FLOORS—Varnish Finish

General Specifications—(1) Flextex Sealer. (2) DuKwik 4-Hour Varnish. (3) Chief Quick Dry Spar Varnish. (4) Dreadnought Dull Finish Varnish.

Close Grained Woods—These include Basswood, Beech, Birch, Cedar, Cherry, Cottonwood, Cypress, Elm, Gum, Fir, Hemlock, Hickory, Larch, Magnolia, Maple, Pine, Poplar, Redwood, Spruce, Sycamore, Tamarack, Tupelo and Willow.

Open Grained Woods—These include Ash, Chestnut, Oak, Mahogany and Walnut.

Application Schedule — (1) Close Grained Wood—Apply Flextex. (This may be tinted with Oil Colors to secure stain effect.) Allow twelve hours drying time. Sand. (1A) Open

Grained Wood—Apply CPW Paste Wood Filler Natural or in the color desired. Allow to set from 15 to 30 minutes. Wipe off surplus across the grain. Allow to dry twelve hours. (1B) Open Grained Wood—Apply Flextex. Allow twelve hours drying time. Sand. (2) Apply Du-Kwik 4-Hour Varnish. Allow to dry eight hours. Sand. (3A) Gloss Finish—Apply Chief Quick Dry Spar Varnish. Allow twenty-four hours drying time. (3B) Rubbed Finish—Apply Dreadnought Dull Finish Varnish. Allow twenty-four hours drying time.

Note: Chief Quick Dry Spar and Dreadnought Dull Finish Varnishes may be intermixed to secure any degree of lustre desired.

NEW INTERIOR WOODWORK & FLOORS—Two-Tone Effect For Open Grain Wood Only

General Specifications—(1) Artkraft Penetrating Wood Stain. (2) Pure 4-Lb. Shellac, White or Orange. (3) CPW Paste Wood Filler. (4) DuKwik 4-Hour Varnish. (5) Chief Quick Dry Spar Varnish. (6) Dreadnought Dull Finish Varnish.

Application Schedule—(1) Apply 1 coat Artkraft Penetrating Wood Stain in color desired. Allow four hours drying time. (2) Apply 1 thin coat Pure Shellac, White or Orange according to color of Wood Stain. Allow

four hours to dry. (3) Apply CPW Paste Wood Filler in color desired. Allow fifteen to thirty minutes to set. Wipe off surplus filler across grain. Allow twelve hours to dry. Sand. (4) Apply 1 coat DuKwik 4-Hour Varnish. Allow eight hours drying time. Sand. (5) Full Gloss Finish. Apply 1 coat Chief Quick Dry Spar Varnish. Allow twenty-four hours to dry. (5A) Rubbed Effect Finish. Apply 1 coat Dreadnought Dull Finish Varnish. Allow twenty-four hours to dry.

OLD INTERIOR WOODWORK & FLOORS—Refinishing-Varnish Finish

General Specifications—(1) CPW Paste Varnish Remover. (2) Flextex Sealer. (3) DuKwik 4-Hour Varnish. (4) Chief Quick Dry Spar Varnish. (5) Dreadnought Dull Finish Varnish.

Application Schedule—Woodwork—(1) Clean old finish. Sand smooth. (2) Touch up worn spots with Flextex tinted with Colors in Oil to match rest of woodwork. Allow twelve hours drying time. (3) Apply 1 coat DuKwik 4-Hour Varnish. Allow eight hours drying time. Sand. (4) Full Gloss Finish. Apply 1

coat Chief Quick Dry Spar Varnish. Allow twenty-four hours drying time. (4A) Rubbed Effect Finish. Apply 1 coat Dreadnought Dull Finish Varnish. Allow twenty-four hours drying time.

Application Schedule—Floors—(1) Apply CPW Paste Varnish Remover heavily. Allow ample time for complete penetration. (2) Remove old finish. (3) Clean surface thoroughly with Whax-Wax. Allow to dry completely before proceeding. (4) Follow schedule as for new work under Varnish Finish.



Architects and Contractors PAINTING SPECIFICATIONS

for
Products of CHICAGO PAINTS, INC., Chicago



NEW INTERIOR WOODWORK—Enamel Finish

General Specifications—(1) Dulhue First Coater—Seals Pores Thoroughly, Prevents Checking of Top Coats, Sands Easily, Excellent Foundation for Undercoat. (2) Flat White Undercoating—Perfect Flowing Qualities, No Brush Marks Show, Easily Applied, Sands Smooth. (3) Charm Enamel—The Peer of All Enamels, Equally Durable Inside or Out, Smooth Porcelain-Like Finish, Will Not Yellow with Age. (4) Chief Semi-Gloss. Uniform Eggshell Fin-

ish, Will Not Flash, Dries Hard Yet Elastic, Washable and Durable.

Application Schedule—(1) Apply 1 coat Flex-tex. Allow twelve hours drying time. Sand. (2) Apply 1 coat Flat White Undercoating. Allow twelve hours drying time. Sand. (3A) Full Gloss Finish. Apply 1 coat Charm Enamel. Allow twelve hours drying time. (3B) Eggshell Finish. Apply 1 coat Chief Semi-Gloss. Allow twelve hours drying time.

OLD INTERIOR WOODWORK—Refinishing-Enamel Finish

General Specifications—(1) Dulhue First Coater. (2) Flat White Undercoating. (3) Charm Enamel. (4) Chief Semi-Gloss.

Bleeding Test—If old woodwork has stained finish, test for bleeding as follows:

- Apply Dulhue First Coater over worn spot. Allow eight hours drying time.
- If stain discolors First Coater, apply two coats Chief Aluminum Paint over entire surface allowing twelve hours drying time between coats and after second coat.

(c) Proceed as directed below in paragraphs 3 and 4.

Application Schedule—(1) Clean surface thoroughly and sand old finish smooth. (2) On worn spots, apply 1 coat Dulhue First Coater. Allow twelve hours drying time. Sand. (3) Apply 1 coat Flat White Undercoating. Allow twelve hours drying time. Sand. (4A) Full Gloss Finish. Apply 1 coat Charm Enamel. Allow twelve hours drying time. (4B) Eggshell Finish. Apply 1 coat Chief Semi-Gloss. Allow twelve hours drying time.

UNPAINTED PLASTER SURFACES—Flat, Semi-Gloss or Gloss Finish

General Specifications—(1) Dulhue First Coater. (2) Professional One Coat Flat. (3) Professional Stippling Flat. (4) Chief Semi-Gloss. (5) Chief Inside Gloss. (6) Professional Stippling Gloss. (7) Charm Enamel.

Application Schedule—(1) Apply one coat Dulhue First Coater. If desired, this may be tinted with Colors in Oil to approximate shade of finish coat. Allow twelve hours drying time. (2A) Flat Finish. Apply one or two coats Professional One Coat Flat. (2B) Stipple Flat Finish. Apply one coat Profes-

sional Stippling Flat. For orange peel effect, stipple immediately. For sharp stipple, allow material to set about fifteen minutes before stippling. (2C) Semi-Gloss Finish. Apply one or two coats Chief Semi-Gloss. For stipple semi-gloss finish, apply one coat and stipple as directed under paragraph (2B). (2D) Gloss Finish. Apply one or two coats Chief Inside Gloss. (2E) Stipple Gloss Finish. Apply one coat Professional Stippling Gloss and proceed as directed under paragraph (2B). (2F) High Gloss Enamel Finish. Apply one or two coats Charm Enamel.

REPAINTING PLASTER SURFACES—Flat, Semi-Gloss or Gloss Finish

General Specifications—(1) Dulhue First Coater. (2) Professional One Coat Flat. (3) Professional Stippling Flat. (4) Chief Semi-Gloss. (5) Chief Inside Gloss. (6) Professional Stippling Gloss. (7) Charm Enamel.

Preparation of Surface—(1) Cut open all cracks. Fill with patching plaster. Allow to dry. (2) Apply one coat Dulhue First Coater

to all patched spots. Allow twelve hours drying time. (3) Apply one coat Dulhue First Coater over entire surface. Allow twelve hours drying time.

Application Schedule—Proceed with finish to be used as directed under Flat, Semi-Gloss, or Gloss Finish above, in paragraphs (2A) to (2F).



Architects and Contractors

PAINTING SPECIFICATIONS

for

Products of CHICAGO PAINTS, INC., Chicago



NEW PLASTER SURFACES—Tiffany Finish

General Specifications—(1) Dulhue First Coater. (2) Chief Semi-Gloss. (3) CPW Glazing Liquid.

Application Schedule—(1) Apply one coat Dulhue First Coater. Allow twenty-four hours drying time. If surface is extremely porous, apply second coat of Dulhue First Coater. (2) Apply one coat Chief Semi-Gloss. Allow twenty-four hours drying time. (3) Apply CPW Glazing Liquid, tinted to desired shade, as per Glazing directions given below.

Glazing Directions—One Color Work—Use CPW Glazing Liquid tinted to desired shade with Colors in Oil. Apply to surface with four inch wall brush. With a piece of washed linen, moistened with the tinted Glazing

Liquid, mottle the entire surface back and forth, up and down. The more irregularly this is done, the more artistic the effect will be.

Two or More Colors—Decide which color shall predominate and apply Glazing Liquid tinted to this color over entire surface. Apply Glazing Liquid, tinted to secondary colors in irregular spots about fourteen inches wide. Moisten a piece of washed linen with the predominating color of Glazing Liquid and mottle the entire surface blending the secondary colors together.

Caution—Be sure to moisten cloth with Glazing Liquid before mottling. When too wet, wring out and use again.

REPAINTING PLASTER SURFACES—Tiffany Finish

General Specifications—(1) Dulhue First Coater. (2) Chief Semi-Gloss. (3) CPW Glazing Liquid.

Application Schedule—(1) Cut open all cracks. Fill with patching plaster. Smooth off and allow to dry hard. (2) Apply 1 coat Dulhue First Coater to all repaired spots. Allow twenty-four hours drying time. (3) Apply 1

coat Chief Semi-Gloss to entire surface. Allow twenty-four hours drying time. If surface is too dark, apply second coat Chief Semi-Gloss to secure uniform background. (4) Apply CPW Glazing Liquid tinted to desired shade with Colors in Oil. (5) Proceed with Tiffany work as per Glazing Directions in paragraph above under Tiffany Finish.

NEW PLASTER SURFACES—Plastic Oil Textures

General Specifications—(1) Dulhue First Coater. (2) Professional Oil Plastic.

Application Schedule—(1) Apply 1 coat Dulhue First Coater. Allow twenty-four hours drying time. On extremely porous walls, a second coat may be required. (2) Apply 1 coat Professional Oil Plastic. Texture while wet as per directions below.

Texturing Directions—(1) Select tool to be used. A cut sponge, steel comb, rubber sponge, whisk broom or many other devices may be employed. (2) With tool selected, texture entire surface while wet. (3) After texturing, spray entire surface with Color Glaze, (see column on right) and sweep over lightly with celluloid triangle or any flexible material. This produces a beautiful two-toned effect with high lights. Charming blends may be obtained by spraying on different colors, holding the gun at various angles on each

color. For a metallic effect, blow on colored bronzes with an insect spray, then varnish with Du-Kwik 4-Hour Varnish.

Color Glaze—Add 1 pint Colors in Oil of desired shade to 1 gallon Professional Oil Plastic.

Stone Block Effect—Finish color effect desired, allow plastic to set over night, then cut joints. The blocks may then be glazed faintly if an antique effect is desired.

Double Action Brocade Finish—Comb the surface with a steel graining comb with horizontal lines. Allow to dry over night. Then apply a heavy coat of oil plastic. Texture with rubber sponge cut to flat surface. Twist with a $\frac{1}{4}$ turn stipple. Then spray the color glaze over and highlight by sweeping over lightly with a celluloid triangle. The combed undercoat, with the horizontal lines will show up, creating a double texture.



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for
Products of CHICAGO PAINTS, INC., Chicago



NEW OR OLD CONCRETE FLOORS—Interior or Exterior

General Specifications—(1) Chief 4-Hour Porch and Floor Enamel. Genuine Bakelite Base. Acid Resistant. Deep Rich Gloss. Unharmed by Oil or Grease. Non-Fading Colors. Withstands Heaviest Traffic. Alkali Resistant. Easy to Clean and Keep Clean.

Application Schedule—(1) New Floors. Wash thoroughly with white vinegar. Rinse with clear water. Allow ample time to dry out. (1A) Old Floors. Omit vinegar wash but

clean off all grease, wax and soap accumulations especially around laundry tubs, wash racks, grease pits, etc. (2) Apply one coat Chief 4-Hour Porch & Floor Enamel of color selected. Allow twenty-four hours drying time, longer if necessary due to humidity or poor ventilation. (3) Apply second coat Chief 4-Hour Porch & Floor Enamel. Allow twenty-four hours drying time. (4) Apply CPW Floor Wax over entire surface.

NEW EXTERIOR WOODWORK—Soft Wood—Resinous or Pitchy Wood

General Specifications—(1) Major White Paste Paint. Lead-Zinc-Titanium Base. Hides Perfectly—Saves Extra Coats. Saves Time and Labor in Preparation. Outwears other Exterior Paints. Intense White—Stays White. Covers $\frac{1}{3}$ to $\frac{1}{2}$ more Surface per Gallon.

Application Schedule—Soft Wood. (1) Apply 1 coat Major White Paste Paint mixed as follows—1 gallon Paste, $1\frac{1}{2}$ gallons Boiled Linseed and 1 quart Pure Turpentine. Allow from 4 to 8 days drying time. (2) Apply second coat Major White Paste Paint mixed as follows—1 gallon Paste, 1 gallon Boiled Linseed and 1 quart Pure Turpentine. Allow from 4 to 8 days drying time. (3) Apply third

coat Major White Paste Paint mixed as follows—1 gallon Paste, 1 gallon Boiled Linseed and 1 pint Pure Turpentine.

Resinous or Pitchy Wood—(1) Apply 1 coat Major White Paste Paint mixed as follows—1 gallon Paste, 1 gallon Boiled Linseed and three quarts Pure Turpentine. Allow from 4 to 8 days drying time. (2) Apply second coat Major White Paste Paint mixed as follows—1 gallon Paste, 1 gallon Boiled Linseed and $\frac{1}{2}$ gallon Pure Turpentine. Allow from 4 to 8 days drying time. (3) Apply third coat Major White Paste Paint mixed as follows—1 gallon Paste, 1 gallon Boiled Linseed and 1 pint Pure Turpentine.

REPAINTING EXTERIOR WOODWORK—Porous or Sun-Exposed Surfaces—Non-Porous or Sun-Protected Surfaces

General Specifications—(1) Major White Paste Paint.

Application Schedule—Porous or Sun-Exposed Surfaces. (1) Apply 1 coat Major White Paste Paint mixed as follows—1 gallon Paste, $1\frac{1}{2}$ gallons Boiled Linseed and 1 quart Pure Turpentine. Allow from 4 to 8 days drying time. (2) Apply second coat Major White Paste Paint mixed as follows—1 gallon Paste, 1 gallon Boiled Linseed and 1 pint Pure Turpentine.

Non-Porous or Sun-Protected Surfaces—(1) Apply 1 coat Major White Paste Paint mixed as follows—1 gallon Paste, 1 gallon Boiled Linseed and 3 quarts Pure Turpentine. Allow from 4 to 8 days drying time. (2) Apply second coat Major White Paste Paint mixed as follows—1 gallon Paste, 1 gallon Boiled Linseed and 1 pint Pure Turpentine.

Note—These mixing directions are for white and light tints. Additional thinners are required for deeper shades. For clear, uniform, long-lasting tints use Colors in Oil.

Remodel and Insulate *at the Same Time, with*

VEOS
Genuine Porcelain
★ TILE ★



VEOS Porcelain on Steel tile is not an imitation or synthetic material. It has a genuine porcelain finish and is widely used and generally considered superior to any wall covering material available at any price.

A wide assortment of beautiful colors and sizes—at no premium in price—makes it suitable for any

tiling job. Its quick and easy application, over existing walls—without muss, fuss or bother—is a truly revolutionary development. Installed by approved Carpenter applicators it solves irritating labor difficulties for Builders, Property Owners and Management Companies; and it is marketed under a sales policy which appeals to soundly managed Building Material Dealers.

Installation of VEOS



Applying Tile on
Foundation



Fastening Foundation
Sheet to Wall



Grouting and Pointing
the Joints

VEOS
Genuine Porcelain
★ TILE ★

The quick and fool-proof installation of VEOS Porcelain Tile right over existing walls by Carpenter Mechanics, makes it ideal wall covering for remodeling and new construction work. The water-proofed foundation sheet is mechanically grooved on 1½" centers horizontally and vertically; each individual tile (porcelain enameled front and back sides) is buttered on back side with a special mastic and permanently locked in place on the self-locating foundation sheet; the joints are then pointed and water-proofed with special grouting. The finished job is mechanically perfect and will last as long as the wall to which it is applied.

The Veos foundation sheet is basically an insulating material of ½" thickness. However, each individual fibre is water-proofed, by a special European method, before being compressed and cut into 4' x 5' sheets and then grooved. It will not buckle or warp; it is also vermin-proof.

Veos Porcelain on Steel Tile is made of 20 gauge INGOT IRON with two coats of vitreous enamel (porcelain) fused on at 1600 degrees. It is guaranteed for a life-time against crazing, cracking or color fading. Should an individual tile be damaged through abuse it is easily and quickly replaced in a perfect color match.

Wherever tile is specified VEOS Porcelain Tile offers unique advantages. Let us tell you more about this remarkable material.

GIBBS BOARDTILE

COMES IN WALL-SIZE PANELS

Sizes available are many and varied, for economy in cutting and application in maximum size wall panels. Sheets scored in 4" squares, usually used for wall tile-effects and in 8" squares for ceilings, are made in the following sizes:

1x4'	2x4'	3x4'	4x4'
4x5'	4x6'	4x7'	4x8'

The above are also made in unscored sheets, as are the following sizes:

4x9'	4x10'	4x11'	4x12'
------	-------	-------	-------

One square foot weighs about 15 ounces and a sheet 4x8' about 30 lbs.

BASEBOARDS

are available in a 5/16" thickness. Stock sizes are 4", 6" and 8" widths, in lengths of 3', 4', 6' and 8'. Cap or top MOULDING is furnished scored or unscored to match the color of the Boardtile selected, in a width of 1 1/2", rabbeted to fit over the top of the tile. Corners can be coped or butted to meet the condition.

METAL MOULDINGS

The Gibbs line includes the new, narrow extruded mouldings of white metal, highly polished, which will never stain, rust, tarnish or dent; also the Stainless Steel as well as the Chrome-plated. In-corners, out-corners, division strips, bathtub strips, are available.

Many special TRIMS, ACCESSORIES and panels with grooving, scoring, or designs are available to meet any demands of decorative style trends. Gibbs Boardtile is as modern as the latest architectural fashion!



for Stores, Restaurants, Counters and Interiors

Gibbs Boardtile cleans with a damp cloth. It is water, steam, soap, grease and vermin resistant.

NOT A SUBSTITUTE, BUT AN IMPROVEMENT . . . for New model homes, and all remodeling jobs.

Gibbs Boardtile was specified by the official architects of the "Town of Tomorrow" and approved by the New York World's Fair Board of Design.

USE OUR PLANNING DEPARTMENT

Estimates, room layouts, color schemes, cutting schedules, material lists and suggestions for decorative effects will be gladly furnished free, for any room in the home or commercial building installations. You are invited to write

GIBBS BOARDTILE CORPORATION

660 North Aberdeen Street
CHICAGO

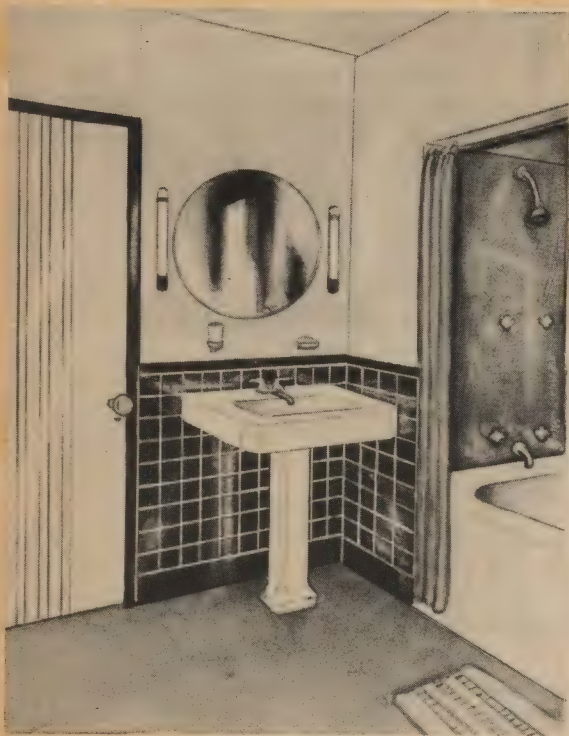


for Living Rooms in City and Summer Homes

MODERN WALLS AND CEILINGS

Use

GIBBS BOARDTILE



for Bathrooms

Get Samples . . .

from your dealer. If he does not carry Gibbs Boardtile on display write us for samples, color chart, circulars and free estimate for any walls.

Manufactured exclusively by
**GIBBS BOARDTILE
CORPORATION**

660 North Aberdeen Street
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when

WALL and CEILING
specifications call for:

BEAUTY

Choose Gibbs Boardtile for modern smartness—gleaming beauty—mirror-smooth lustre . . . to meet today's demands for decorative distinction. This highly compressed wood fibre board, $\frac{1}{8}$ " thick, has an exceedingly fine texture with integral finish of durable, hard smoothness, produced by an exclusive formula. These large, rigid panels will give lengthy service without cracking, chipping or peeling.

COLORS

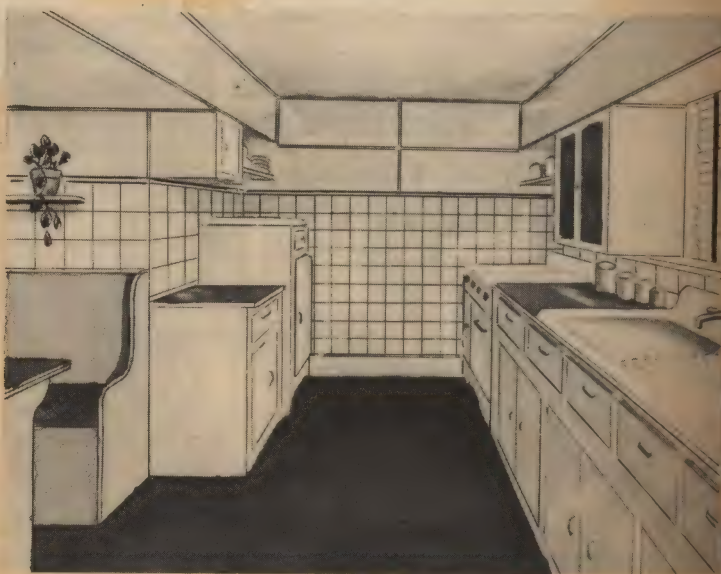
Unlimited colors are available. Standard colors, plus black and white, scored and unscored, are carried in stock for immediate delivery. Any tint, pastel shade, tone variegated finish, or varitone can be produced to order at slight additional cost.

MARBLE, WOOD-GRAIN AND TILE-EFFECT REPLICAS of numerous designs are carried in stock or can be produced upon order.

ECONOMY—EASY INSTALLATION

Application is very simple. Any careful carpenter or anyone handy with tools can do a good job. Gibbs Boardtile can be sawed, planed, sandpapered. It is applied with a special water-proof adhesive cement which we furnish. One gallon covers from 60 to 80 square feet. Installation is easy over any flat surface, which makes Boardtile ideal for remodeling jobs. Nailing to the studding or partitions insures better bonding and strengthens the walls. Large, rigid wall-size panels bring utmost pre-fabrication economy to any job.

DURABILITY



for Kitchens

Presstitched
KIMSUL
REG. U. S. & CAN. PAT. OFF.
Expanding Blanket
INSULATION

2 Kimsul Developments are Revolutionizing Building Insulation

In developing KIMSUL* research and experiment did not stop with a wood fiber insulation which met the usual requirements. On the contrary it continued until a new and better form had been perfected . . . *Stitched Kimsul in Expandable Blankets.*

CROSS SECTION of KIMSUL blanket (approximately twice natural size) shows the creped layers of wood fibers and millions of still air cells which form a highly efficient thermal insulant.

KIMSUL is delivered in cartons containing sufficient material to insulate 250 sq. ft. in Commercial Thickness; 125 sq. ft. in Standard Thickness; or 83-1/3 sq. ft. in Double Thick.

Expandability and Stitching

Delivered to a job in a *compressed form* each blanket of Kimsul, when installed, is expanded to about 5 1/2 times its compressed length without decreasing the intended thickness or lessening its heat stopping ability.

SPEEDS WORK . . . LOWERS COSTS . . .
Because the material is compressed it is easier to handle . . . and storage costs are reduced. It goes up quickly.

Kimsul blankets are made in widths to fit snugly between studding and rafters . . . little measuring or fitting is necessary. Using the shipping carton as a dispensing container the end of the Kimsul blanket is nailed on at the top . . . the blanket expanded and attached at bottom . . . then cut off. That's all there is to it.

*REG. U. S. AND CAN. PAT. OFFICE

STITCHING CONTROLS EFFICIENCY AND PERMANENCE . . .
Each blanket of Kimsul, before being compressed, is stitched its entire length with rows of strong twine approximately 20 times stronger than necessary to support its entire weight. This prevents Kimsul from being expanded beyond its most efficient density. It also prevents sagging and helps to hold Kimsul in place permanently.

With Stitched Kimsul an inexperienced workman can make a snugly uniform installation. Installing Kimsul is usually a "one man" job.

Stitched Kimsul is made in various widths and in Commercial, Standard and Double Thickness, a width and thickness best suited for any job.



KIMBERLY-CLARK CORPORATION
ESTABLISHED 1872
NEENAH, WISCONSIN

8 South Michigan Ave.
CHICAGO

122 East 42nd Street
NEW YORK

See next 3 pages:

The research and engineering skill Kimberly-Clark has put into Kimsul is most important. Because while all *good* insulation will increase your comfort and cut your fuel bills, Kimsul accomplishes both with substantial *savings* in cost.

Applicable to Kimsul, the factors at the right are equally applicable to all other insulation materials! So, when you study it, ask yourself this question, "What other materials are so outstanding not only in Efficiency but in Permanence and Economy as well!"

Every
**INSULATION
MATERIAL SHOULD
MEET THESE
REQUIREMENTS**

These factors
determine
EFFICIENCY

These factors
determine
PERMANENCE

These factors
determine
COST

INSULATION BETWEEN STUDS RAFTERS OR JOIST		TOTAL ANNUAL HEATING LOAD			MAX. HOURLY SUMMER HEAT GAIN		
		ANNUAL LOAD (1000 BTU)	ANNUAL SAVING (1000 BTU)	% SAVING	HOURLY HEAT GAIN (BTU)	HOURLY SAVING (BTU)	% SAVING
IN WALLS AND CEILINGS	NO KIMSUL.....	209200	.....	....	36345	.....	....
	COMMERCIAL KIMSUL.....	169100	40100	19.2	28835	7510	20.7
	STANDARD KIMSUL.....	155700	53500	25.6	26732	9613	26.4
	DOUBLE THICK KIMSUL.....	140200	69000	33.0	24298	12047	33.2
	COMMERCIAL IN WALLS STANDARD IN CEILINGS.....	163300	45900	22.0	27625	8720	24.0
	STANDARD IN WALLS DOUBLE THICK IN CEILINGS.....	149600	59600	28.5	25281	11064	30.5
IN CEILINGS ONLY	COMMERCIAL KIMSUL.....	194200	15000	7.2	31550	4795	13.2
	STANDARD KIMSUL.....	188200	21000	10.0	30340	6005	16.5
	DOUBLE THICK KIMSUL.....	182200	27000	12.9	28889	7456	20.5
WEATHERSTRIPPING ON ALL DOORS AND WINDOWS.....		203180	6020	2.8	.....	.....	....
STORM SASH ON ALL DOORS AND WINDOWS.....		182800	26400	12.6	.....	.....	....

As shown in the table above, almost any desired performance can be produced by insulating with Kimsul. Obviously as the per cent of heat, or the amount of fuel saved is increased by using more insulation, the cost of insulating increases. The economic thickness provides the best balance between insulation costs and fuel savings.

Kimsul...

THESE REQUIREMENTS

1

Heat blockading power

2

Snugness

3

Thickness

1. The measure of the heat stopping power of any material is its "K" factor. Kimsul's rating is .27, which is above the average. Actually a home insulated with one inch of Kimsul is better protected against cold and heat than a castle with masonry walls several feet thick.

2. But mere ability to stop heat isn't enough! Just as the warmest bed clothes won't keep one warm if they are not properly tucked in, so will the best insulation be inefficient if it does not fit snugly. Kimsul is flexible. It can be drawn around corners or tucked behind wires and pipes . . . providing a continuous unbroken blanket of insulation without heat wasting cracks.

3. Obviously a home in Memphis needs less protection from cold than one in Medicine Hat. To combine maximum comfort with economy, Kimsul is made Commercial, Standard and Double Thickness. The proper thickness for any home is available.

1

Stamina

2

Stability

1. Kimsul resists fire and moisture. It is also treated to resist attacks of vermin and insects. Being made of creped plies of wood fibres that will not shred or sift, the material itself is inherently lasting.

2. Insulation must stay where it belongs. If it packs down, or pulls away from joists, rafters or studding, it creates "transoms" through which heat escapes. Kimsul is "Presstitched" . . . stitched the length of each blanket with rows of strong twine. It does not sag or settle and its thickness remains uniform.

HOW KIMSUL MEETS

1

Cost of product

2

Cost of Installation

3

No waste

4

Shipping and handling charges

1. Per square foot, Kimsul's cost is low.

2. And: Made in widths to fit snugly between studs and rafters, it eliminates much fitting. Yet, it is quickly and easily cut for spaces of unusual size or shape. Being expandable, it goes up quicker. One man generally can install Kimsul so rapidly that labor costs are lessened.

3. Every bit of Kimsul is usable. Even left over pieces are used for caulking around doors and windows.

4. Kimsul is extremely light. Installed, 1,000 square feet weigh but 129.6 pounds. Being shipped and handled in its compressed form, enough for a moderate sized house can be carried in an automobile. So costs of shipping and handling are also reduced.

The Fuel Saved Soon Pays Its Cost

How Much Kimsul Is Needed?

In the average uninsulated home the heat wasted through walls and ceilings is divided about 60% through the walls and about 40% through the upper ceiling or roof. The diagram below shows how much of this heat can be saved with different thicknesses of Kimsul.

Note that even Commercial thickness stops a lot of heat from escaping . . . the percentage increasing as a greater thickness of insulation is used. However, experience shows that a Standard Kimsul blanket generally provides the greatest comfort and fuel saving at the least cost, thus giving the best return on the insulation investment.

Obviously, if a building is in a region subject to severe winters . . . or fuel is high in price . . . it is an advantage, both from the standpoint of economy and comfort, to use a greater thickness. And in this fact lies one of



1. A Standard blanket KIMSUL, insulating a sloping roof stops approximately 58.6% of the heat that would otherwise be through it.

2. A Standard blanket KIMSUL, insulating the ceiling below a ventilated attic (an attic with windows or lower openings) saves about 70% of the heat that would otherwise escape through it.

3. Standard KIMSUL in the side and end walls will save about 54% of the heat that would otherwise escape through them.

4. Complete insulation of walls and roof with Standard KIMSUL will save up to 57% of the heat that would otherwise escape through them.

Kimsul's outstanding advantages.

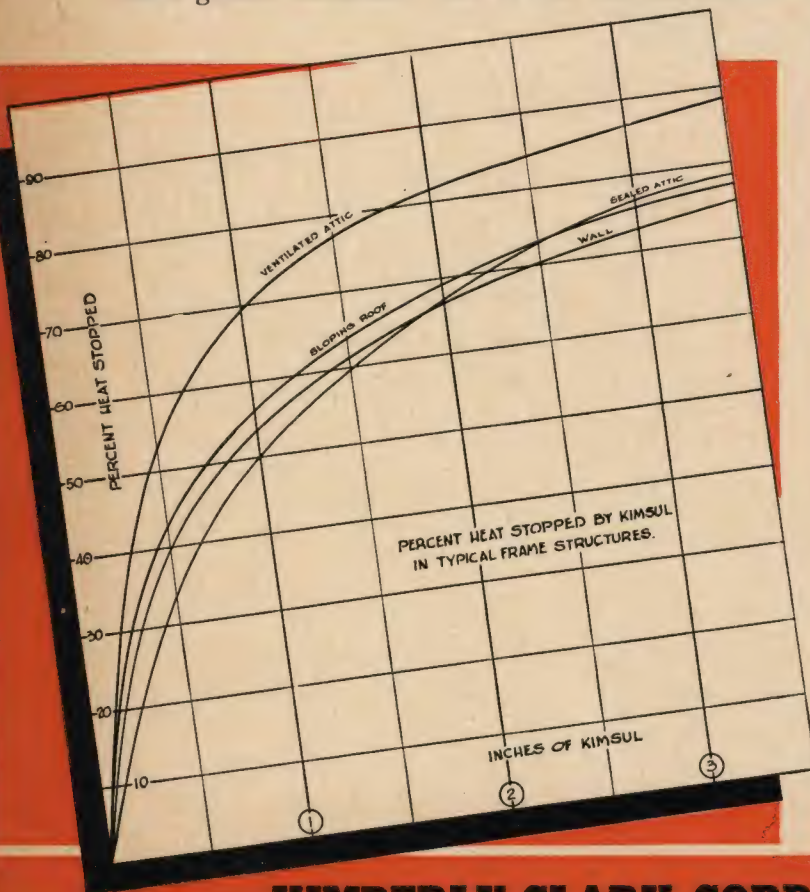
For once you determine the thickness of insulation which is best you can get that thickness in Kimsul.

Partial Insulation is Good— Complete Insulation is Better

While the question of the proper thickness of insulation depends on climate, and the cost of fuel, there is no question about the *extra value in completely insulating a home*. The time to insulate is when the building is erected. Once walls have been finished, it is not only costly but sometimes impossible to get complete insulation which will be permanently satisfactory.

Of course, in homes already built, up to 70% of that 40% of the heat which is now escaping through the roof can be saved by insulating the top ceiling, with Kimsul. But remember, 60% of the total heat lost in an uninsulated home escapes through the side walls. So you can't reap the greatest advantage from Kimsulating unless *both* walls and roof or upper ceiling are protected.

The best part of it is that when you use Kimsul you can afford to do a complete job. Kimsul is so economical that it is wasteful to skimp on your insulating job.



KIMBERLY-CLARK CORPORATION, Manufacturers

ESTABLISHED 1872

NEENAH, WISCONSIN

CHICAGO, 8 South Michigan Avenue

NEW YORK, 122 East 42nd Street

Printed in U. S. A.

SIMPLIFIED WHITE LEAD PAINTING GUIDE

EASY TO BUY White lead, linseed oil, turpentine and drier (and colors-in-oil when desired)—the ingredients used in pure white lead paint—are available at practically all stores that sell paint. That makes it extremely easy to get the materials you need for a fine paint job.

Since white lead may be mixed for use on practically any kind of surface, easy mixing instructions for application on all common materials are given on the next two pages. This further simplifies your painting for each kind of surface. You can readily mix white lead to meet all common conditions by following those simple instructions.

To determine how much of each ingredient is needed for any paint job, use the quantities given in the tables below. Just measure how

much surface you have to paint, refer to the line in the table applicable to the material of which the surface is constructed, and adjust the quantities upward or downward according to whether you have more or less than 1,000 sq. ft. to paint.

The exact amount of paint needed for any job will vary to some extent with the condition of the surface and the individual applying the paint. Therefore, it is better when doing any painting to figure on a little more paint than you think you will actually need so you will be sure to have enough. Any paint left over is always useful for the little touching up and small paint jobs that are always occurring. White lead paint keeps indefinitely if kept tightly covered.

QUANTITY OF MATERIALS

For painting 1000 sq. ft. of surface

REPAINTING

(Figures are totals for two coats)

KIND OF SURFACE	GALLONS PAINT	WHITE LEAD	LINSEED OIL	LEAD MIXING OR REDUCING OIL	TURPENTINE	LIQUID DRIER
Exterior Wood	3	45 lb.	1 1/8 gal.	.....	3 pt.	3/4 pt.
Wood Shingles	3 3/4	55 lb.	1 3/8 gal.	.....	1/2 gal.	1 pt.
Interior Wood, Plaster and Wallboard	2 1/2	40 lb.	.....	1 1/4 gal.	.....	.....
Exterior Stucco, Concrete, Stone and Brick	5	70 lb.	3 qt.	2 gal.	.....	.....

NEW WORK

(Figures are totals for three coats)

KIND OF SURFACE	GALLONS PAINT	WHITE LEAD	LINSEED OIL	LEAD MIXING OR REDUCING OIL	TURPENTINE	LIQUID DRIER
Exterior Wood	4 3/4	62 lb.	1 7/8 gal.	.....	3 qt.	1 1/4 pt.
Wood Shingles	8 5/8	105 lb.	3 5/8 gal.	.....	1 5/8 gal.	2 1/4 pt.
Interior Wood	4	56 lb.	2 qt.	1 1/4 gal.	3 pt.	1/4 pt.
Interior Plaster and Wallboard	3 3/4	57 lb.	.....	2 gal.	.....	.....
Exterior Stucco, Concrete and Stone	10	135 lb.	2 1/4 gal.	3 1/2 gal.	.....	.....
Exterior Brick	10	120 lb.	3 1/2 gal.	2 gal.	5/8 gal.	1 1/4 pt.

LEAD INDUSTRIES ASSOCIATION

420 LEXINGTON AVE.

NEW YORK, N. Y.

EASY

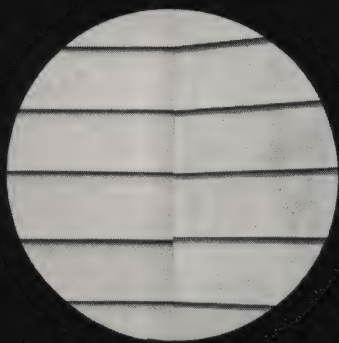
SIMPLE MIXING INSTRUCTIONS

(These formulas for average conditions.)

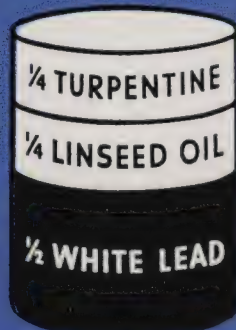
KIND OF SURFACE

REPAINTING

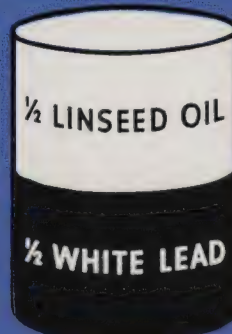
OUTSIDE WOOD (Including Shingles)



FIRST COAT



FINISH COAT



Coverage per Gallon on Lumber 700 sq. ft.
on Shingles 400 sq. ft.

700 sq. ft.
600 sq. ft.

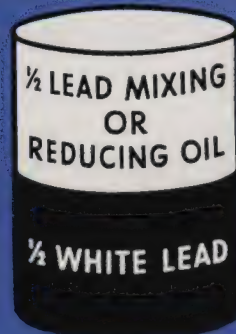
Divide the white lead into two parts. To one, add an equal volume of half linseed oil and half turpentine. To the other add an equal volume of half linseed oil for gloss finish coat. If raw linseed oil is used in either coat, add 1/4 pt. liquid of paint made. For flat finish coat, add 1/2 pt. liquid of white lead mixing or reducing oil.

*For shingles make one portion of white lead as the other and use larger for mixing first coat.

INSIDE WOOD, PLASTER AND WALLBOARD



BOTH COATS



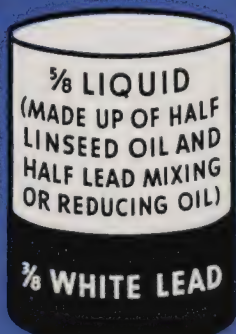
Coverage per Gallon 800 sq. ft.

Mix the white lead with an equal volume of lead mixing or reducing oil and apply.

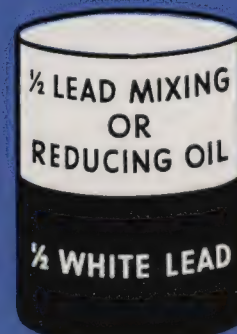
BRICK, STUCCO, CONCRETE, STONE



FIRST COAT



FINISH COAT



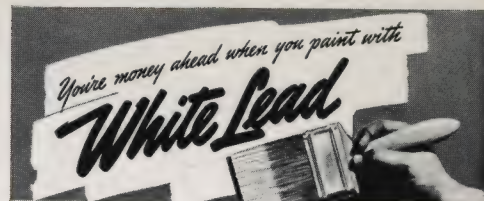
Coverage per Gallon 400 sq. ft. 600 sq. ft.

Divide the white lead paste into two parts. Mix one in the proportion of 1 part white lead to 5 parts liquid, the liquid being half linseed oil and half lead mixing or reducing oil. Use this for first coat. To the other part of white lead, add an equal volume of lead mixing or reducing oil for the finish coat.

MIX

FOR ALL COMMON SURFACES

(Follow manufacturers' directions where available.)



NEW WORK

For unpainted lumber, take one-quarter of the white lead* and add to it double its volume of liquid made up of two-thirds linseed oil and one-third turpentine. Use for priming coat and follow with the two coats described at left. If raw linseed oil is used add $\frac{1}{4}$ pt. liquid drier for each gallon of paint made.

*For unpainted shingles, take a little less than half the white lead to make the priming coat and proceed as above.

COVERAGE PER GALLON—PRIMING COAT

on lumber
600 sq. ft.
on shingles
200 sq. ft.

TWO-COAT PAINTING

Three coats of paint are always recommended for best results on unpainted surfaces. Application of only two coats is usually false economy and all conditions being equal, is certain to shorten the life of the paint job. However, if two-coat work is necessary, white lead paint offers the best chance of avoiding future trouble and expense. The priming coat should be mixed in the proportion of 100 lb. paste white lead, $1\frac{1}{2}$ gal. linseed oil, $\frac{3}{4}$ gal. spar varnish, $\frac{1}{2}$ gal. turpentine, 1 pt. liquid drier, and $\frac{1}{4}$ pt. raw umber. Finish coat given under repainting at left should be used for the last coat.

For unpainted inside wood, take about one-third of the white lead paste and mix it with an equal volume of linseed oil and two-thirds as much turpentine to make the priming coat. If raw linseed oil is used, add $\frac{1}{4}$ pt. liquid drier for each gallon of paint made.

For unpainted plaster and wall board, take about one-third of the white lead paste and mix it with a third again as much lead mixing or reducing oil to make the priming coat.

In both cases, follow with two coats described at left.

COVERAGE PER GALLON—PRIMING COAT

on wood
700 sq. ft.
on plaster and wallboard
800 sq. ft.

For unpainted stucco, concrete and stone, take a little less than half of the white lead paste and mix it with half again its volume of liquid composed of a half and half mixture of linseed oil and lead mixing or reducing oil. Use for priming coat.

For unpainted brick, take about 40 per cent of the white lead and add to it twice its volume of liquid composed of five-sixths linseed oil and one-sixth turpentine. If raw linseed oil is used, add $\frac{1}{4}$ pt. liquid drier for each gallon of paint made. Use for priming coat.

In both cases, follow with two coats at left.

COVERAGE PER GALLON—PRIMING COAT

200 sq. ft.

EASY TO HAVE EXACTLY THE COLOR YOU WANT

White lead may be tinted to practically any color or shade you desire. You are not limited to a few standard colors, but can suit your taste exactly. Since the range of colors you can have by tinting white lead is so extensive, it is impossible to give complete information here. Instead just a few common color formulas are given. They will serve merely as a guide. By adding the colors-in-oil to the white lead, little by little, you can arrive at exactly what you

want. Also many additional colors can be had by combining two or more of the colors-in-oil with white lead. For instance, greens or blues may be grayed by adding a little lampblack, browns may be made warmer by adding a little Indian red. Remember that a colored paint appears darker after it is dry than when it is wet, so when you paint out a little to see if you have the color you want, let it dry thoroughly before judging it.

COLOR FORMULAS

The following formulas show the amount of colors-in-oil to add to each 100 lb. of white lead to get approximately the color indicated. For larger or smaller amounts of paint, increase or reduce the amount of colors-in-oil proportionately.

Ivory	— $\frac{1}{16}$ pt. Med. Chrome Yellow
Cream	— $\frac{1}{2}$ pt. Raw Italian Sienna
Buff	— 1 pt. Raw Italian Sienna
Yellow	— $\frac{1}{8}$ pt. Med. Chrome Yellow
Light Gray	— $\frac{1}{8}$ pt. Lampblack
Dark Gray	— 1 pt. Lampblack
Light Tan	— $\frac{1}{4}$ pt. Burnt Turkey Umber

Dark Brown— $1\frac{1}{2}$ gal. Burnt Turkey Umber
1 qt. Indian Red

Light Blue — $\frac{1}{16}$ pt. C. P. Prussian Blue

Dark Blue —1 qt. C. P. Prussian Blue

Light Green—1 qt. Chromium Oxide Green.

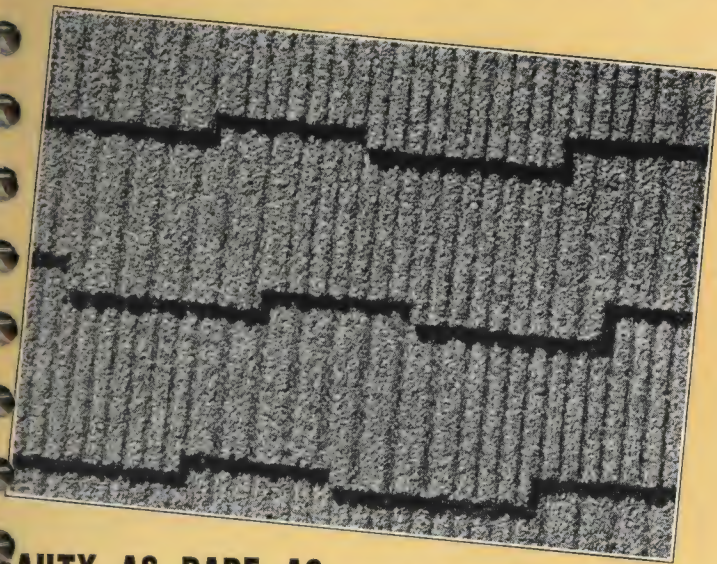
The following dark colors, usually used only for trim, are made without the use of white lead:

Dark Green —Straight C. P. Dark
Chrome Green

Dark Red — $\frac{1}{2}$ pt. Indian Red
 $\frac{1}{2}$ gal. Bulletin Red

Very Dark Brown—1 gal. Burnt Turkey
Umber
1 qt. Indian Red

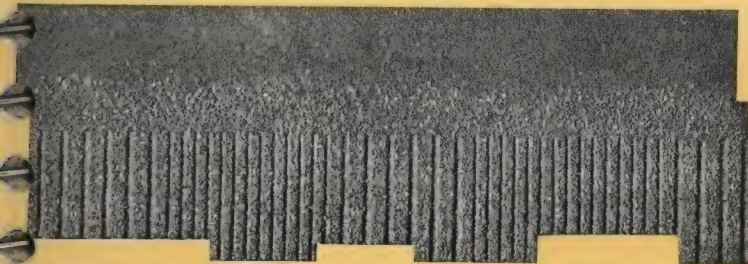
New and Exclusive Mule-Hide Thick Butt Thatch Roofs



BEAUTY AS RARE AS A DOUBLE RAINBOW

- Soft, rich, iridescent colors
- Deep, rugged shadow lines
- Pleasing varied-width Cor-Du-Roy
- Giant-size ceramic granules
- Unique thatch-effect butts
- Distinctive, unusual appearance

THICK BUTT THATCH SHINGLE—SIZE 12½" x 36"



SPECIFICATIONS

Full Double Coverage—Size 12½" x 36"
—Weight 240 lbs. per square—Butt exposure 5" average—Class "C" Underwriters' Label—Headlap, 6½" to 8½" average—Colors, Campfire and Green Crest Blends.

FOR EXTRA SERVICE

Double coverage for extra safety . . . 35% extra waterproofing asphalt on exposed butts . . . 59% less exposed edges . . . giant mineral granules for extra fire resistance.

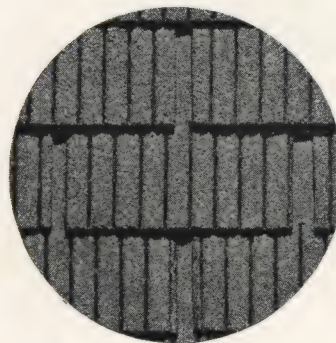
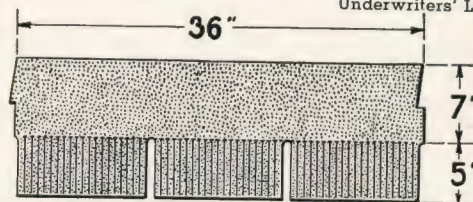
THICK BUTT COR-DU-ROY ROOFS

Meets F.H.A. Roofing Specifications in effect March 15, 1940 for weight and double coverage—that is, no felt underlay is required on new roofs with a pitch of 7" in a foot or steeper. One of the most durable, attractive, and popular roofs sold today.



SPECIFICATIONS

Size 12"x36" . . . Weight approximately 222 lbs. per square . . . Butt exposure 5" . . . Headlap 2" . . . Class "C" Underwriters' Label . . .



Colors

Campfire, Green Crest, Rainbow, Paisley Blends . . . Monotone Colors—Gray Green, Shamrock Green, Toy Red, Ebony Black, Forest Brown, Ultra Blue.

40% MORE ASPHALT ON EXPOSED BUTTS

Enlarged cross section of Mule-Hide Thick Butt Shingle.



Drawings show how Mule-Hide extra thick exposed butts are built up with WATERPROOFING ASPHALT, not with laminated non-waterproof minerals (more meat, less bone).

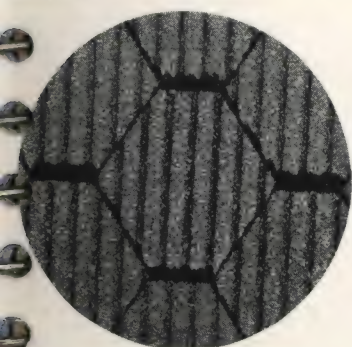
Enlarged cross section of ordinary Thick Butt Shingle.



ASPHALT MULE-HIDE ROOFS ASBESTOS
THE LEHON COMPANY
West 44th to 45th Sts on Oakley Ave. Chicago, Illinois.

STANDARD HEX and TRIPLE - COVERAGE SUPER - HEX

PLAIN OR COR-DU-ROY
Standard Hex—Cor-Du-Roy only in Super Hex.



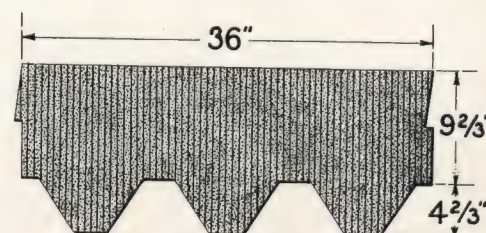
Mule-Hide has made this popular shape still more attractive and architecturally correct with a 3-TAB DESIGN—and increased its value with the "expansion-joint" Cor-Du-Roy—see following page. Specifications—WEIGHTS—Super hex 232 lbs. per sq. Stand. Hex Cor-Du-Roy 174 lbs. . . . HEADLAP—Super 5", Stand. 2" . . . EXPOSURE—both shingles, 4-2/3" . . . Class "C" Underwriters' Labels.

FOR EVERY COLOR HARMONY

Gray Green, Shamrock Green, Ebony Black, Toy Red—Campfire Blend, Green Crest Blend, Rainbow Blend.

TRIPLE COVERAGE SUPER HEX

Illustrated below, meets all F.H.A. Requirements effective March 15, 1940 on which shingle roofs are approved. No felt underlay required on new roofs over old ones regardless of pitch.



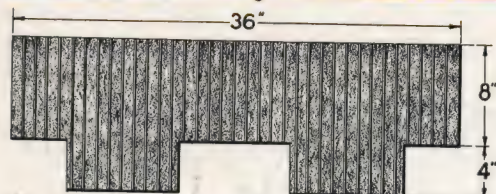
MULE-HIDE COR-DU-ROY ASPHALT ROOF



Nu-Square Tab COR-DU-ROY ROOFS RICH - RUGGED - MODERN

An exclusively different design roof—that not only beautifies homes, but also makes them look outstandingly modern and substantial. It costs no more than the common "garden variety roofs" that make the sky-line of so many communities monotonously tiresome. And, of course, it gives the protection of "expansion joint" Cor-Du-Roy (see opposite page).

SUPER NU-SQUARE TAB — 12" x 36"



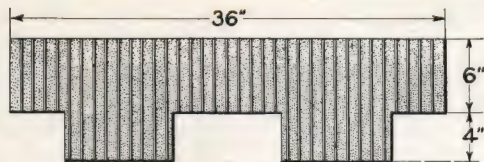
COLORS

CampFire Blend, Green Crest Blend, Shamrock Green, Ebony Black.

SPECIFICATIONS

Full Double-Coverage . . . Size 12" x 36" . . . Butt Exposure 4" . . . Weight, approximately 210 lbs. . . . Headlap 4" . . . Class "C" Underwriters' Label.

STANDARD NU-SQUARE TAB



COLORS

Blends: Camp-fire, Green Crest and Rainbow. Monotone Colors: Gray Green, Shamrock Green, Ebony Black, Toy Red.

SPECIFICATIONS

Size 10" x 36" . . . Butt Exposure 4" . . . Weight, approximately 180 lbs. per square . . . Headlap 2" . . . Class "C" Underwriters' Label.



Nu-Square Tab is an inexpensive but costly-looking roof with heavy shadow lines.

Factories:

CHICAGO, ILLINOIS
WILMINGTON, ILLINOIS
MEMPHIS, TENN.

ASPHALT
THE LEHON COMPANY
44th to 45th St on So. Oakley Ave.
MULE-HIDE ROOFS
ASBESTOS
COMPANY
Chicago, Illinois



BEFORE Mule-Hide Cor-Du-Roy Concord Siding.

TO MAKE OLD HOMES LOOK NEW— MULE-HIDE *Concord Siding*

AFTER Mule-Hide Cor-Du-Roy Concord Siding.



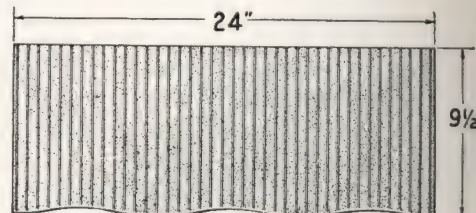
The ideal way to modernize aging houses that have loose or blistered stucco or dried-out, cracked, and rotting siding. Costs little more than the 3-coat paint job that it takes to dress them up, even if the old siding is good enough to paint. Mineral, fire-resisting surface—with Cor-Du-Roy (see opposite page).

SPECIFICATIONS

Size 24" x 9½" . . . Exposure 8" x 24" average . . . Weight, 142 lbs. per square . . . Headlap 1½" to 1¾" . . . Class "C" Underwriters' Label.

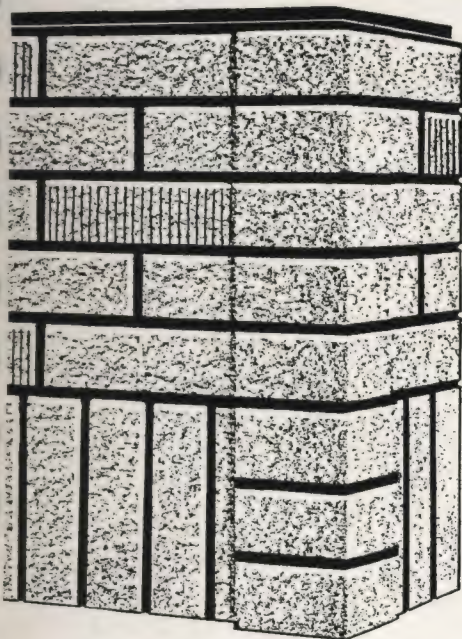
COLORS

A beautiful blue-white and a clean soft buff.



WAREHOUSE AND
DEALER STOCKS IN
MOST TOWNS AND CITIES

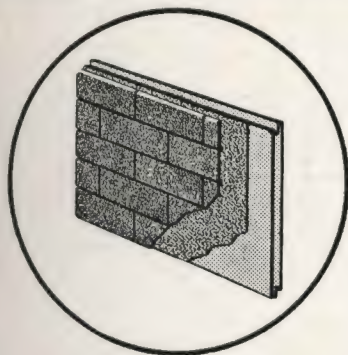
DO YOU WANT SAMPLES — FULL COLOR LITERATURE — MORE DETAILS? —



BRIC-FACE

Insulating Siding

DUAL-PURPOSE... INSULATES AND MODERNIZES AT ONE OPERATION

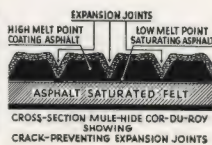
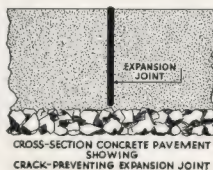


5 PROTECTIVE THICKNESSES

- Inside surface covered with special waterproof coating asphalt
- Insulation board, 1/2" thick—asphalt impregnated
- Then a coating of waterproofing asphalt over the board
- Followed by a thick coating of mastic asphalt—waterproof
- And a final fire-resisting, decorative surface of crushed brick granules

Not an Asphalt or Asbestos siding, but a 5/8" thick INSULATING siding. Each panel covers more than 4 1/4 sq. ft. for fast application. It can't be beat for modernizing old buildings—or for saving money on new ones. A dual insulation and waterproofing siding that eliminates paint costs and saves fuel costs.

COR-DU-ROY FOLLOWS PROVED *Engineering* PRINCIPLES



All "dense" substances lengthen when heated—and shorten when cooled. That's why concrete pavements have "expansion joints" to prevent cracking under such strains. That's why Mule-Hide has an "expansion joint" Cor-Du-Roy surface.

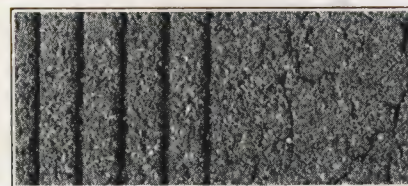
CONTINUOUS "EXPANSION JOINTS" PREVENT CRACKS EXPANSION TAKES PLACE HERE



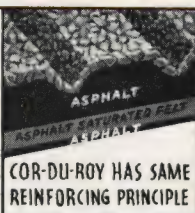
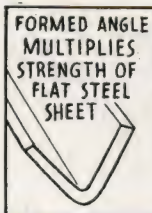
HOW THE MULE-HIDE COR-DU-ROY EXPANSION JOINT WORKS...

18 YEAR ROOF TESTS PROVE COR-DU-ROY PREVENTS CRACKS

This unretouched photograph of a Mule-Hide Shingle taken off a roof after 18 years' hard service shows how Cor-Du-Roy's ribs and grooves do not crack under extreme temperature changes—while plain smooth surfaces are unable to stand the strain of the years.



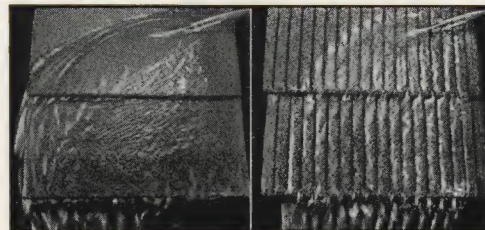
COR-DU-ROY INCREASES WIND RESISTANCE



Just as steel is channeled or angled for extra strength, the alternate ribs and grooves of Cor-Du-Roy increase its rigidity and stubborn resistance to high winds.

ALTERNATE RIDGES AND VALLEYS SPEED DRAINAGE

Note this actual comparison under identical streams of water. Plain surface lets water "side-drift"—gives it a chance to work under shingles. Cor-Du-Roy stops it, starts it draining straight down.



SEND SAMPLES AND INFORMATION



ON THE MULE-HIDE PRODUCTS CHECKED BELOW:

- | | |
|--|--|
| ☐ THICK BUTT THATCH ROOFS | ☐ NU-SQUARE TAB |
| ☐ HEX ROOFS | ☐ 5" SAFETY LAP |
| ☐ THICK BUTT ROOFS | ☐ COLD PROCESS BUILT-UP ROOFS |
| ☐ STAY TITE FLASHING CEMENT | ☐ BRIC FACE INSULATING SIDING |
| ☐ FOUNDATION WATERPROOFING | |

FIRM NAME _____

INDIVIDUAL _____

ADDRESS _____

CITY _____

STATE _____

PASTE TO PENNY POST CARD—MAIL TO THE LEHON COMPANY—4425 S. OAKLEY—CHICAGO

USE THIS CARD...



MULE-HIDE ROOFS

NOT A KICK
IN A
BILLION FEET

Quit

**FOR DAMP-PROOFING
FOUNDATION WALLS**

Nu-Life Liquid Asphalt or Mule-Hide
Damp-Tite Compound is ideal for
applying to outside walls next to fill.
It stops seepage completely — meets
Federal Specifications No. SS-A-701 for
Asphalt primer. Costs less than $\frac{3}{4}$ of
a penny per sq. ft.

**TO KEEP FLASHINGS
WATERPROOF LONGER**

Use Mule-Hide Stay-Tite Plastic Cement—it's a compound of asphalt and fibred asbestos which never hardens—always pliable and waterproof. Low cost and long-lived.



APPLY IT BY THE
MULE-HIDE 5" SAFETY LAP METHOD
WITH PROTECTED NAILING
AND MAKE MORE SATISFIED CUSTOMERS

Exposed nails that rust out or work loose—and gaps or “fish mouths” at seams—have caused at least 90% of all early roll roof leaks. You can stop all this by applying roll roofing the Mule-Hide 5” Safety Lap Way. It’s simple—the under layer of the lap is “stagger-nailed” to the roof deck—a 5” ribbon of waterproof cement is spread over the nailing lines—and the top lap securely pressed into place. Write for brief, illustrated instruction booklet.

MULE-HIDE HAS TAKEN ALL THE *Red Tape*

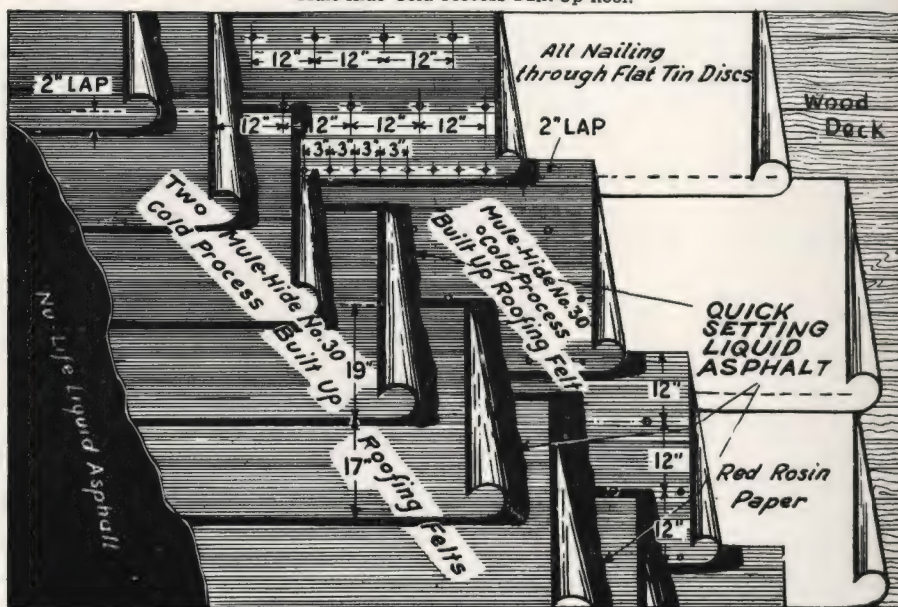
Out of Flat-Type Roof Jobs with the Weather-Tested *Cold Process Method*

Any good carpenter can apply them with perfect results—no costly equipment to add to the price and increase total building expense. Only tools needed are a hammer, a knife, a brush or mop, and a yardstick.

Proved by years of service on such buildings as Schools, Stores, Offices, Factories, Hotels, Theatres, Warehouses, etc.—All materials are precision-made and factory-inspected. A very economical and safe way to get the right kind of flat-type roofs on your buildings.

MAIL CARD ON BACK OF THIS PAGE FOR BOOK OF SIMPLE DRAWINGS SHOWING EACH STEP IN COLD PROCESS METHOD

Mule-Hide Cold Process Built-Up Roof.



No Red Tape or Mystery This simple drawing shows every step in complete application.

Factories:
CHICAGO, ILLINOIS
WILMINGTON, ILLINOIS
MEMPHIS, TENN.

ASPHALT MULE-HIDE ROOFS ASBESTOS

THE LEHON COMPANY

West 44th to 45th Sts on Oakley Ave Chicago, Illinois.

WAREHOUSE AND
DEALER STOCKS IN
MOST TOWNS AND CITIES

FOR SAMPLES AND MORE COMPLETE INFORMATION MAIL CARD ON BACK OF THIS PAGE

glass

Flat Drawn Sheet Glass •
Polished Plate Glass • Thermopane
• Tuf-Flex Tempered Plate Glass •
Vitrolux Color Fused Tempered Plate
Glass • Glastone Structural Glass
Faced Masonry • Aklo Heat-Absorb-
ing Plate Glass • Vitrolite Colorful
Structural Glass • Extrudalite Store-
front Metal • Blue Ridge Figured
and Wire Glass

LIBBEY • OWENS • FORD GLASS COMPANY

Glass makes small homes "grow"

...SHOVES BACK WALLS...PAINTS ROOMS WITH
SUNSHINE...INCREASES SALABILITY

● There's something about Glass that has a universal appeal. Its crisp cheerfulness has an invigorating effect. Glass creates desire—puts your prospect in the right frame of mind to buy. With a proper use of glass, that cramped, shut-in feeling—so apparent when you first enter some small homes—is entirely absent.

Instead, walls are pushed back with Mirrors. Rooms are painted with sunshine from large windows that are properly placed and artistically planned. Yes, Glass, used generously in all its forms, can make small homes, small rooms, belie their looks—make little rooms look broad and spacious.

Glass is an endless source of inspiration. With it you can create effects that enhance the charm and salability of any home. And remember, for the best effects in mirrors—

for a true reflection of your best efforts—you know, of course, that you must use *Mirrors of ground and Polished Plate Glass*. L·O·F Polished Plate Glass is exceptionally brilliant and remarkably free from imperfections.

Put Glass to work for you. It will help you sell your homes as nothing else can. There are almost illimitable yet inexpensive ways in which you can use its subtle salesmanship. Within the following pages of our catalog you will find many excellent examples of its use, as well as the necessary technical information for its satisfactory application. You can get more help and practical ideas from your local L·O·F Glass Distributor. He will be glad to cooperate in any problem of design or application.

● See what a Picture Window does to a small room. A wall pushed back... a room flooded with sunshine... just one example of what Glass, used generously, can accomplish in a small home.

●



SELECTING THE RIGHT GLASS

The current trend in building which demands so much of glass has created the need for specialized types of glass to meet special requirements. As a result, well-known types of flat glass have been greatly improved. New types have been developed. Their uses cover an ever-broadening field, summarized in the following outline of glazing practice.

SHEET GLASS—A Quality Double Strength is widely used in glazing private homes, apartment houses where low rentals prevail, smaller hotels, schools, hospitals and other public buildings.

POLISHED PLATE GLASS—(Clear and in Colors) In buildings and in private homes where the importance of quality glazing is recognized, Polished Plate Glass is used exclusively. It is essential for store windows. Its use in many mirror installations falls logically within the province of the architect. To furnish even broader opportunities in mirror treatment, L · O · F Polished Plate Glass is also now regularly produced in golden plate, three shades of blue, a peach and a green.

FIGURED AND WIRE GLASS—Figured Glass is generally specified for office corridors, partitions, skylights, elevator doors and other openings where obscurity is desirable. As a decorative medium, its distinctive character is employed in many homes and public buildings. Wire Glass is used in skylights and light wells and usually is required by building codes in openings exposed to the possibility of fire.

THERMOPANE—Thermopane, in its new perfected form, provides double-glass insulation in a highly efficient form—consisting of two panes, separated by an air space, and welded into one metal sealed unit to be glazed in a single sash. Thermopane represents a marked improvement in insulation for all areas where either the practical or decorative scheme requires that glass be used.

AKLO—This Plate Glass, with its special chemical composition, has the unusual property of absorbing infra-red heat rays. This is an important aid in maintaining even temperatures within a structure. AKLO Plate Glass reduces the cost of operating air-conditioning equipment for cooling purposes, because it reduces the total load for a given window area. Recommended for store fronts and lighting fixtures where perishable products are to be displayed.

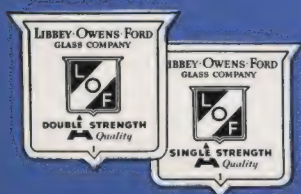
TUF-FLEX—Tuf-Flex Tempered Plate Glass has many specialty uses which employ the advantages of its peculiar properties. Its resistance to impact and thermal shock makes it ideally suited for uses where greater strength is necessary such as in display cases, revolving doors, display shelves, sign facings and show-window trim. Tuf-Flex cannot be cut, mitered, beveled or edged after tempering, and must therefore be ordered from the factory in exact sizes required.

VITROLUX—Vitrolux Color Fused Tempered Plate Glass has the same physical characteristics as Tuf-Flex with the added feature that it is available in a wide range of attractive colors—some translucent and some opaque. It answers the architect's demand for a material that will enable him to use luminous color as an integral part of the structure itself, and may be used to create unusual exterior or interior lighting effects.

VITROLITE—Vitrolite Opaque Structural Glass is furnished in a variety of plain and agate colors for use in bathrooms and kitchens in the home, modern storefront facings, store interiors and fixtures, wainscoting, theater lobbies, toilet partitions in public buildings and similar installations. It is preferred for its unusual structural beauty, for sanitation and for the ease and economy with which its sparkling surface can be maintained.

GLASTONE—Glastone is a specially prepared concrete masonry unit to which a permanent facing of Colorful Structural Glass is bonded and mechanically anchored. Glastone meets the wide demand which exists today for structural glass in the form of a load-bearing masonry unit, to be built into and become an integral part of the building itself.

PRACTICAL INFORMATION ON SHEET GLASS



Libbey-Owens-Ford Flat Drawn Sheet Glass is manufactured in several grades and of varying thicknesses. Single Strength and Double Strength Sheet Glass are regularly supplied in two standard grades—A Quality and B Quality. Both are labeled. (A blue label indicates Double Strength—a red label, Single Strength.)

FLATNESS—The L·O·F exclusive process of manufacture draws the glass into a flat sheet directly from the molten state. This process produces a glass so free from wave that it gives a clearer, sharper image.

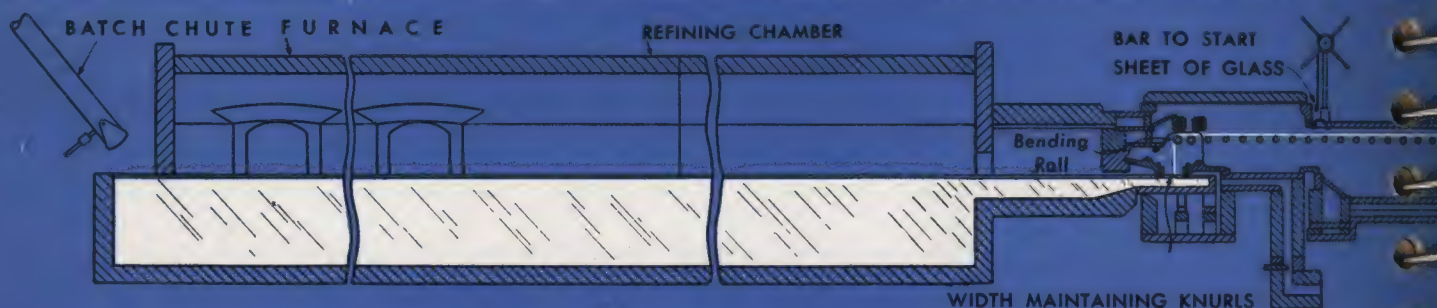
TOLERANCES IN THICKNESS—L·O·F Sheet Glass Table of Thickness Standards is given below:

	Thickness, in.		Lights per in.		Av. Weight, oz. per sq. ft.
	Min.	Max.	Min.	Max.	
SINGLE STRENGTH	.087	.100	10.5	11.50	19.55
DOUBLE STRENGTH	.118	.133	7.5	8.50	26.00
$\frac{3}{16}$ " SHEET	.187	.200	5.0	5.35	40.00
$\frac{7}{32}$ " SHEET	.212	.225	4.4	4.70	45.00
PICTURE GLASS	.056	.067	15.0	17.00	13.00

DIMENSIONS—L·O·F Sheet Glass is cut to dimensions well within the allowable limits of Government specifications, less than $\frac{1}{32}$ in. per $\frac{1}{8}$ in. thickness.

PACKING—All L·O·F Sheet Glass is shipped in Cushion Corner Cap packages—the neatest, cleanest, and nearest to moisture-proof method of packing so far developed.

STANDARD SPECIFICATIONS—All Flat Drawn Sheet Glass shall be Libbey-Owens-Ford A Quality Double Strength, except as otherwise noted, packed in Cushion Corner Cap boxes. Each light shall bear the Libbey-Owens-Ford label, indicating strength and quality of the glass.



THESE SIMPLE DIAGRAMS ILLUSTRATE THE EXCLUSIVE LIBBEY · OWENS · FORD FLAT DRAWING PROCESS. After the glass is drawn from the tank by the L·O·F sheet glass machine, it is thoroughly annealed in lehrs four or five times longer than those used in any other process. This slow and thorough annealing eliminates strains, making a less brittle glass. This exclusive process assures a glass that is—Clearer, Brighter, Flatter.



L·O·F POLISHED PLATE GLASS

Libbey · Owens · Ford Polished Plate Glass is manufactured in plants fitted throughout with the finest and most modern equipment. Only raw materials of highest quality are used. The sparkling luster and brilliance characteristic of L · O · F Plate Glass are a result of grinding and polishing by highly accurate machines. Grinding removes surface inequalities as the glass reaches this stage of manufacture. Polishing, which imparts distinctive beauty to L · O · F Plate Glass is accomplished by felt-covered rotating discs. Each light of glass is carefully inspected and graded before it receives the identifying L · O · F label. Because of its superior finish, unusual clearness and enduring brilliance, discriminating architects and builders prefer and specify Libbey · Owens · Ford Polished Plate Glass for an increasing number of uses.

POLISHED PLATE GLASS FOR MIRRORS

PRACTICAL INFORMATION

The very finest Polished Plate Glass, which is used almost exclusively in making the costliest mirrors, is known as "First Silvering Quality." Owing to the high cost of selecting this quality, it is never specified for building purposes. The next quality is called "Second Silvering" and is often used for high-grade glazing work, but is seldom specified in sizes over 20 sq. ft. Most of the plate glass used in glazing is known as "Glazing Quality." Definite requirements for tolerances in thickness and dimensions are set up in U. S. Government specifications. The general requirements under U. S. standards are:

SIZE AND THICKNESS

The standard thickness of plate glass shall be $\frac{1}{8}$, $\frac{3}{16}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, 1, $1\frac{1}{4}$ and $1\frac{1}{2}$ in. Sheets are available $\frac{1}{4}$ -in. thick in sizes having a maximum area of 250 sq. ft. Glass of $\frac{1}{4}$ -in. thickness may be furnished in any dimensions under the maximum 126 x 284 in. The standard stock thickness for glazing purposes is $\frac{1}{4}$ in., but this may vary between $\frac{7}{32}$ and $\frac{5}{16}$ in. Standard thickness of Colored Plate Glass is $\frac{7}{32}$ in.

TOLERANCES IN THICKNESS

The maximum and minimum thickness allowed shall not be more than the given thickness plus or minus one half the

(Continued on next page)



Model Home No. 17 on the Model Homes Tour, San Francisco World's Fair. Birge M. Clark and David Clark, Palo Alto, Calif., Architects. L · O · F Polished Plate Glass and L · O · F Quality Glass used throughout.

MIRRORS have become, in many instances, an integral part of architectural design. In modern residences, as well as in stores and public buildings, they form an important part of the interior decorative motif. As the use of silvered plate glass continues to broaden, its specification and adaptation become more and more a province of architecture.

Libbey · Owens · Ford Polished Plate Glass is noted for its brilliant polish and freedom from imperfections.

STANDARDS OF QUALITY—For the guidance of the architect and owner and for the protection of the mirror manufacturer, the following standards of quality have been approved by the Mirror Manufacturers Association of America.

A QUALITY—The central area of mirrors of this quality shall be free from major defects, but may contain well-scattered seed and short faint hair lines, when not grouped, and occasionally very light short finish visible only on close inspection. The outer area, in addition to the foregoing, may contain seed and short faint scratches when not grouped.

NO. 1 QUALITY—The central area of mirrors of this quality may contain scattered seed, faint hair lines, one light short finish. The outer area in addition to the foregoing may contain short scratches and occasional strings not over 2 in. long.

NO. 2 QUALITY—Mirrors of this quality may contain the following defects: Numerous scattered seed, occasional coarse seed, light reams, strings, light scratches, short finish if not torn, hair lines if not too densely grouped and bulls-eye if not visible from front inspection.

THICKNESS—Plate glass mirrors of commercial standard quality shall be between $\frac{3}{16}$ and $\frac{5}{16}$ of an inch thick. If specific thicknesses are ordered, a variation of $\frac{1}{32}$ in. plus or minus the given thickness shall be allowed.

SILVERING—All commercial standard quality mirrors shall be silvered in an approved manner and guaranteed for a period of one year from the date of manufacture unless the mirrors are subjected to unusual conditions, such as open weather, moist walls, steamed rooms, direct sunlight or similar conditions.

difference between the standard thicknesses, although for $\frac{1}{4}$ in. glass occasional plates as thick as $\frac{5}{16}$ in. are supplied. The general variation in thickness should not be more than $\frac{1}{32}$ in. for individual lights under 10 sq. ft., in thicknesses up to $\frac{1}{4}$ in. The variation in lights over $\frac{1}{4}$ in. in thickness should not exceed one half the total tolerance for that thickness.

STANDARD SPECIFICATION

Where Polished Plate Glass is specified or shown on plans, it shall be manufactured by the Libbey-Owens-Ford Glass Company, and shall be of (-) quality and (-) thickness (insert quality and thickness) in accordance with U. S. Government Standards.



Here is an excellent example of the beauty and expansive effect obtained when window areas are glazed with Polished Plate Glass. Gilmer Black, Arch.



Little need be said of the importance of Polished Plate Glass mirrors. No home is completely modern without a generous use of mirrors. They are both utilitarian as above and smartly decorative as below and at the right.



Here a large mirror adds depth and brightness to the entrance hall... brings a cheery note of welcome to all who enter.

WINDOW CONDITIONING

[DOUBLE-GLASS INSULATION]

Reduces Heat Loss as much
as 30%—Permits Smaller
Heating Units at Lower
Cost—The Most Important
Single Factor in Home
Insulation.

HERE'S HOW
ARCHITECTURAL FORUM
GIVES THE FACTS ABOUT
WINDOW CONDITIONING

(Two excerpts from
September, 1938 issue)



Net result has been an increased consumer demand for insulated glass, a demand which has inspired the improvement of the winter window and its reappearance in a score of new and attractive forms adapted to every purpose and window type. A demand which bids fair to increase still further as the result of a nation-wide consumer advertising campaign recently begun by one of the large glass companies* describing the advantages of insulated glass under the slogan "Window Conditioning." And because his client or customer will therefore almost certainly be thinking about double

● The true economy of Window Conditioning—double-glass insulation—is easily explained to your clients. Window Conditioning, like all other forms of building insulation, pays for itself in fuel savings alone. And because Window Conditioning costs less than other desirable forms of insulation and saves more fuel for each dollar invested, its inclusion in your specifications represents sound planning. Another important consideration: through Window Conditioning, it is possible to materially reduce the size (and cost) of the heating unit specified. In many basementless type homes, where utility room space is at a premium, this feature of Window Conditioning represents considerable savings in space as well as original cost.

Then, too, with the increasing acceptance of modern winter air conditioning with its higher healthful humidity, Window Conditioning becomes almost a necessity if fogged windows, soiled draperies and excessive cleaners' bills are to be prevented. There are many forms of prefabricated, double-glazed windows available in both wood and steel sash, and in both double hung and casement type.

glass before building or afterward, it behooves the forward-looking architect and builder to bring his knowledge of the subject up to date.

According to the calculations of Prof. G. L. Larson, of the University of Wisconsin, it saves more fuel per dollar than any other form of insulation. Prof. Larson supports this contention with the following data for an 8-room frame house in Milwaukee:

	Unin- sulated	4 in. insulation ceiling and sidewalls	Storm sash and doors	Insulation and storm sash
Per cent saving . .		21.0	30.8	55.9
Cost of insulation		\$284	\$106	\$390
Fuel per season . .	\$286	\$214	\$198	\$126
Saving per season		\$72	\$88	\$160

*Libbey-Owen-Ford Glass Company

WINDOW CONDITIONING

(DOUBLE-GLASS INSULATION)

**PAYS BIG
DIVIDENDS
IN CLIENT
SATISFACTION
AND SAVINGS**



**FUEL SAVING
30.8%**

The house to which these calculations were applied is illustrated above. It is two stories high with unfinished attic space. It contains 8 rooms and bath above the basement and is of frame construction, with a concrete foundation. Windows were assumed to permit air leakage equivalent to two air changes per hour. Storm sash was assumed to reduce this air leakage one-half. Heat season 260 days. Oil at 7.2c, 140,000 Btu, operated at 65% efficiency. Coefficients: Walls .26, glass 1.13, double glass .45, ceiling .30, floor .34.

● Window Conditioning will save approximately 23% of the fuel used in the typical uninsulated suburban residence, according to the results of a study of four representative houses in Metropolitan New York, made by Alfred J. Offner, consulting engineer, past-president of the New York Society of Consulting Engineers, and Treasurer of the American Society of Heating and Ventilating Engineers. These calculations were based on the use of outside storm sash and storm doors on all openings or the equivalent use of modern double-glazed (weather-stripped) casement windows instead of ordinary windows:

If these houses had been well insulated *before* they were Window Conditioned, Mr. Offner's figures show that of the remaining fuel cost for an insulated house, Window Conditioning would save from 30 to 36%.

Window Conditioning does more than merely cut down fuel bills. It checks cold drafts and prevents fogging on windows. It is essential to satisfactory winter air conditioning with its higher healthful humidity. Window Conditioning, Double-Glass Insulation, keeps the inner pane of glass comparatively warm even though the outer pane may be as cold as the outdoor air. This prevents condensation from taking place on the inner pane of glass.

FUEL SAVINGS FROM HOUSE INSULATION

BY PROF. G. L. LARSON, UNIVERSITY OF WISCONSIN

Published in American Builder Magazine, June, 1937.

	Ordinary Construction	1/2" Insulation on Exposed Ceilings and Walls	Weather Stripping only (Doors and Windows)	4" Insulation on Exposed Ceilings and Walls	Storm Sash and Storm Doors Only	1/2" Insulation (Walls and Ceiling) Plus Storm Sash and Doors	4" Insulation (Walls and Ceiling) Plus Storm Sash and Doors
Total Heat Loss B.t.u.'s.....	159,175	139,974	125,741	118,773	110,383	91,182	69,981
Percent saving		12.1	21.0	25.4	30.8	42.7	55.9
Sq. Ft. H. W. Radiation	1060	932	837	791	735	608	466
Fuel per season, gals.	3980	3499	3143	2969	2759	2279	1750
Cost of fuel per season	\$286	\$252	\$226	\$214	\$198	\$164	\$126
Saving in Fuel		\$34	\$60	\$72	\$88	\$122	\$160
Cost of Construction		\$142	\$129	\$284	\$106	\$248	\$390
Interest & depreciation on investment		\$9.94	\$9.03	\$19.88	\$10.60	\$20.54	\$30.48
Net Saving		\$24.06	\$50.97	\$52.12	\$77.40	\$101.46	\$129.52
Percent return on investment, not		16.9	39.5	18.3	73.0	41.0	33.4
Years for net fuel saving to pay off investment....		5.9	2.53	5.45	1.37	2.45	3.01
Cost of heating plant....	\$1590	\$1398	\$1256	\$1186	\$1102	\$912	\$699
Reduction in plant cost..		\$192	\$334	\$404	\$488	\$678	\$891

THERMOPANE

Double-Glass Insulation in a New, Highly-Efficient Form—Two Panes Welded into One Metal-Sealed Unit, To Be Glazed in a Single Sash.

● Practically any type of flat glass may be used in Thermopane. It may be made up of two sheets of glass of identical type, such as two sheets of Plate, Window or Figured Glass, or one light may be clear and the other figured. Again, to meet certain summer heat conditions, the outer light might be Aklo Heat-Absorbing Plate Glass and the inner light either clear or obscure. Generally speaking, the types of glass that are practical with Thermopane are limited only by the types of glass available and the particular problem involved.

With Thermopane, the heating engineer and architect have available an excellent means of insulating large areas without sacrifice of vision. Where privacy is desired or diffused light an essential, Thermopane again fully solves the problem. In addition, Thermopane may be set in movable or sliding sash to eliminate fixed walls or partitions. Thermopane insulates the year 'round—it keeps heat inside in winter, outside in summer.

WIDE SELECTION OF THERMOPANE FABRICATIONS

Generally speaking, the design effects obtainable with Thermopane are limited only by the types of flat glass available. Thus any combinations of D.S.A., Polished Plate, Colored Plate and any of the various Figured glasses are practical.

CONSTRUCTION—A single Thermopane unit consists of two panes of glass separated by an air space which is sealed at all edges with metal. The glass used in Thermopane for exterior use ranges from Double Strength A Quality to $\frac{1}{8}$ ", $\frac{3}{16}$ " and $\frac{1}{4}$ " Polished Plate Glass, with a standard $\frac{1}{4}$ " air space. For interior use, the air space may be either $\frac{1}{4}$ " or $\frac{1}{2}$ ".

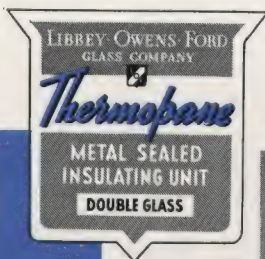
The air space between the two mirror-clean lights of glass is dehydrated and sealed with a metal band at the factory—thus dirt and condensation within the air space are avoided.

THERMOPANE SIZES—Thermopane is available in exceptionally large sizes ranging up to 72" x 96", depending upon the type of glass used. Following are the maximum and minimum dimensions for each type of glass:

	Maximum Wide	Minimum Long
D.S.A. and $\frac{1}{8}$ " Polished Plate	30" x 60"	8" x 8"
$\frac{3}{16}$ " sheet or Polished Plate..	48" x 72"	12" x 12"
$\frac{1}{4}$ " Polished Plate.....	72" x 96"	12" x 12"

The maximum and minimum dimensions apply equally to Figured glass.

Cross section of Thermopane sample illustrating the metal seal and the dehydrated air space between the two panes of glass.



Thermopane was used very effectively in this picture window to insulate a large area both winter and summer.



Thermopane is not available in single strength glass.

THERMOPANE THICKNESS—To arrive at the thickness of Thermopane, add the air space thickness to the thickness of the two panes of glass. A plus tolerance of $\frac{1}{32}$ " for $\frac{1}{8}$ " and thinner glass and a plus tolerance of $\frac{1}{16}$ " for glass over $\frac{1}{8}$ " thick shall be allowed over the specified thickness.

EDGE TOLERANCE—Obviously Thermopane is only available in stock sizes or special sizes to order. In listing cutting sizes, figure $\frac{1}{8}$ " shorter and narrower

than the opening size for lights up to 24" square. Above 24", for any dimension, the cutting sizes should be $\frac{3}{16}$ " or $\frac{1}{4}$ " under the opening size.

SASH SIZES AND WEIGHTS—Because Thermopane is heavier than single glass, allowance for greater sash balances must be made in double hung sash. (See detail for weight.)

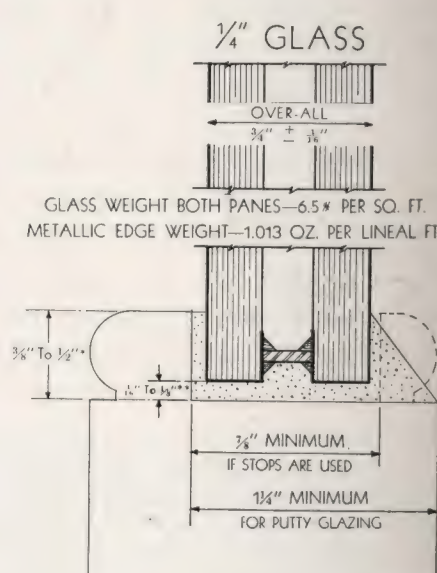
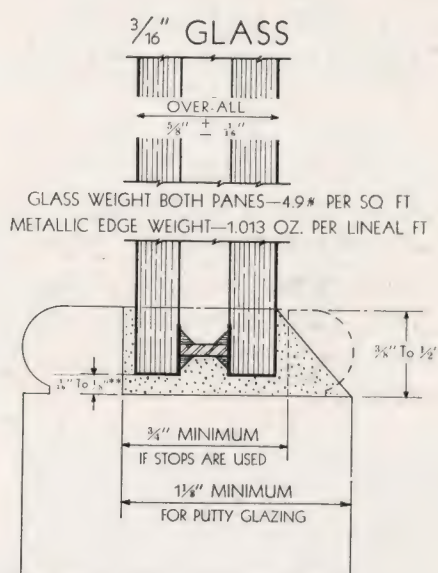
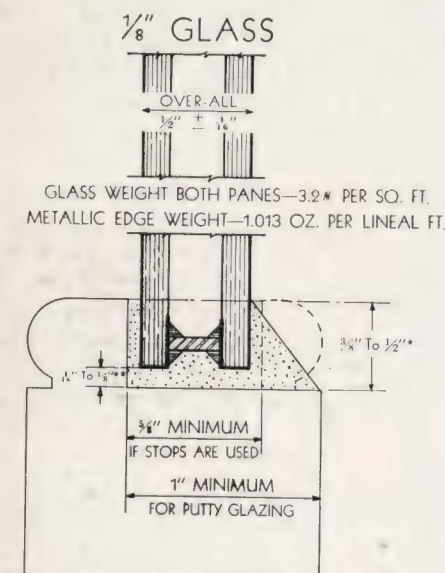
Rabbit Width Dimensions: To insure coverage of the edge construction, rabbit widths for lights under 24" for any dimension should be $\frac{3}{8}$ ". For lights over 24" for any dimension, the width should be $\frac{7}{16}$ " to $\frac{1}{2}$ ".

Rabbit Depths: This dimension should not be less than 1" for $\frac{1}{4}$ " air space and $\frac{1}{8}$ " thick glass. Somewhat more shallow rabbit dimensions can be successfully used, however, if the bright copper color of the metalized edges are allowed to be partially exposed to view.

Increase the rabbit depth correspondingly for thicker glass. (See detail.)

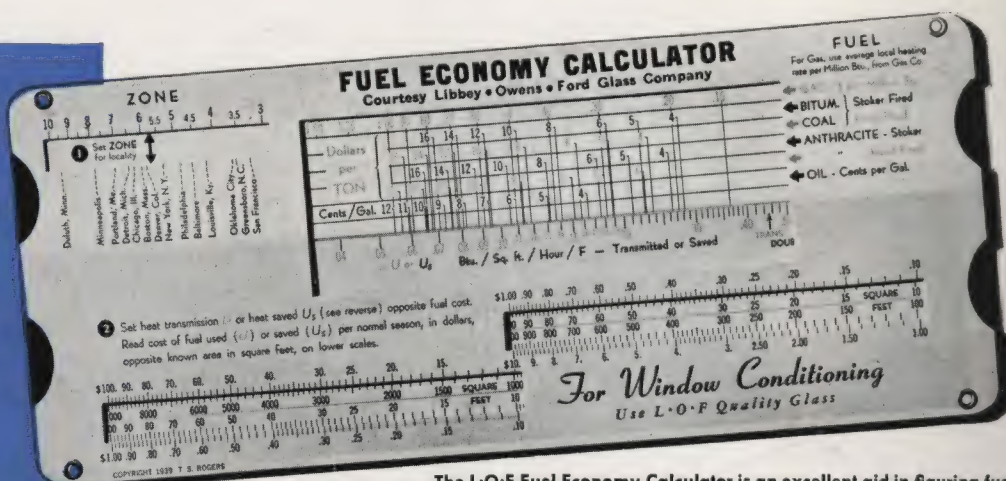
TECHNICAL DATA AND ASSISTANCE—If you have a special problem on which you require more complete information, write to the Architectural Service Department, Libbey-Owens-Ford Glass Company, Toledo, Ohio.

FULL SIZE THERMOPANE INSTALLATION DETAILS MAY BE APPLIED TO ANY WOOD OR METAL SASH OR DOOR



- * RABBIT SHOULD BE $\frac{3}{8}$ " FOR PANES UNDER 24 INCHES IN EITHER DIMENSION AND $\frac{7}{16}$ " TO $\frac{1}{2}$ " FOR PANES OVER 24 INCHES.
- ** ALLOW $\frac{1}{16}$ " AT EACH END FOR SIZES UNDER 30 INCHES. ALLOW $\frac{3}{32}$ " TO $\frac{1}{8}$ " AT EACH END FOR SIZES OVER 30 INCHES.

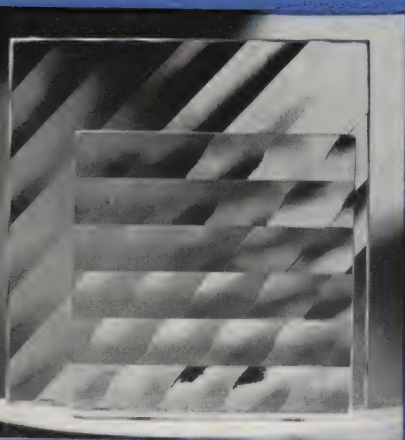
**USE THIS RAPID
CALCULATOR
TO FIGURE
WINDOW
CONDITIONING
SAVINGS**



The L.O.F. Fuel Economy Calculator is an excellent aid in figuring fuel economies through the use of various types of double-glass insulation. In addition, the Calculator will help you greatly in estimating the dollar and cent savings on other types of wall and ceiling insulation. If you would like one, write the Advertising Department, Libbey-Owens-Ford Glass Company, Toledo, Ohio.

MANY INTERESTING AND DISTINCTIVE EFFECTS

With these Modern FIGURED GLASSES



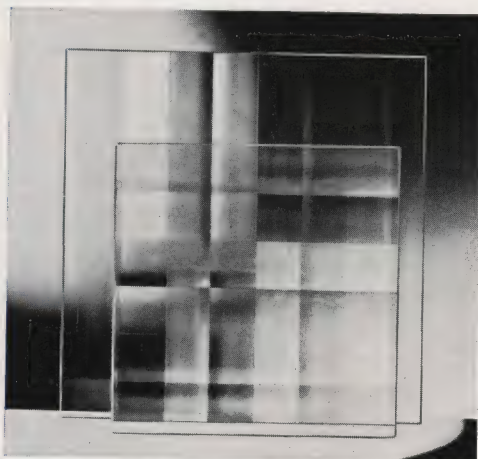
Double glazing one light of Polished Flutex with lines running horizontally imposed over one with lines turned at an angle.



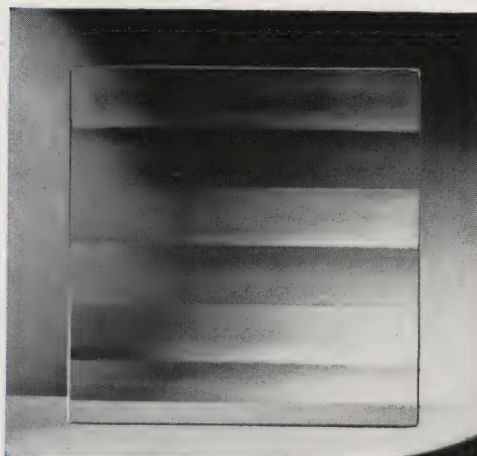
Single section of Polished Flutex glazed horizontally.

● Single-glazed Louvrex or Flutex allows sweeping expanses of horizontal or vertical lines which conform to modern contemporary design. Used in windows, they present a pleasing appearance from the inside and lend simple dignity to the architectural detail when viewed from the outside.

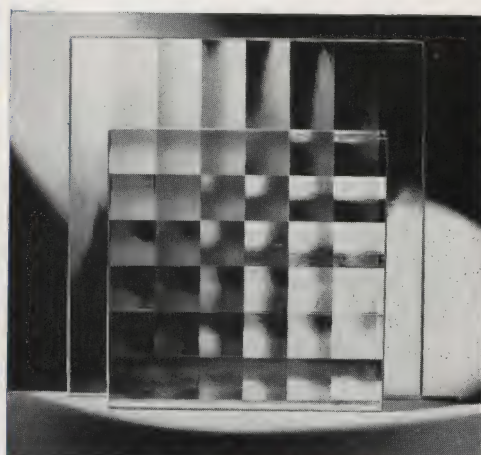
Satinol Finished Louvrex or Flutex increases obscurity and affords soft, restful illumination. These highly translucent glasses add a number of pleasing patterns when double glazed. With the lines running at right angles to each other, or by varying the angle, many interesting results are obtained.



Double glazed section of Polished Louvrex with lines running horizontally on one light and vertically on the other, producing a checkerboard effect.

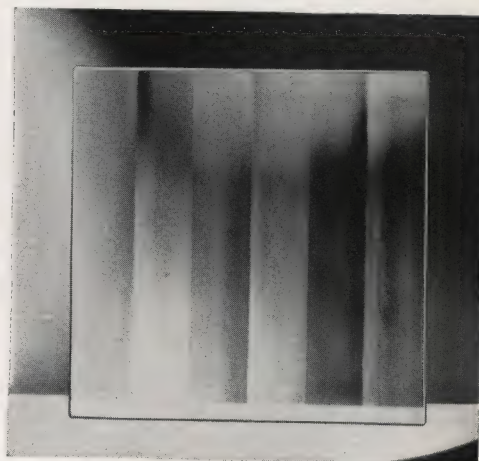


Single section of Polished Louvrex glazed horizontally.

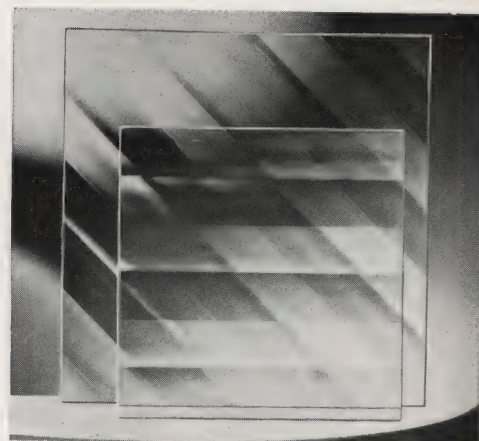


Double glazed section of Polished Flutex with the lines running horizontally on one light and vertically on the other, producing a checkerboard effect.

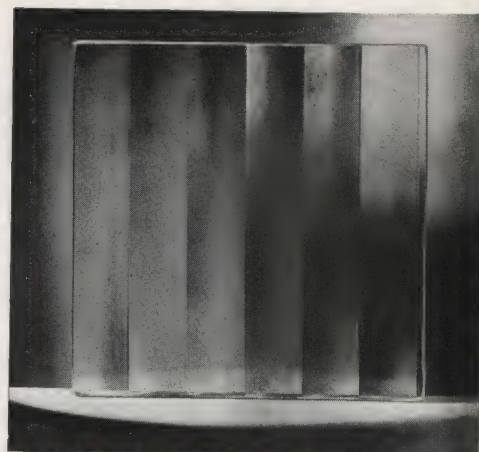
The applications are still further extended by a number of luminous effects with artificial light. Illumination with plain or colored lights behind Louvrex or Flutex Glass provides soft, diffused or sparkling light, depending on the nature of the installation. Brightly lighted backgrounds in colorful patterns when seen through Polished Louvrex or Flutex afford dramatic designs for store fronts, theaters, cafes and public buildings. Unusual modern screens and partitions can be further enhanced when combined with effective lighting, either stationary or in motion. An almost endless variety of new color effects may be achieved.



Single section of Polished Louvrex with pattern lines running vertically.



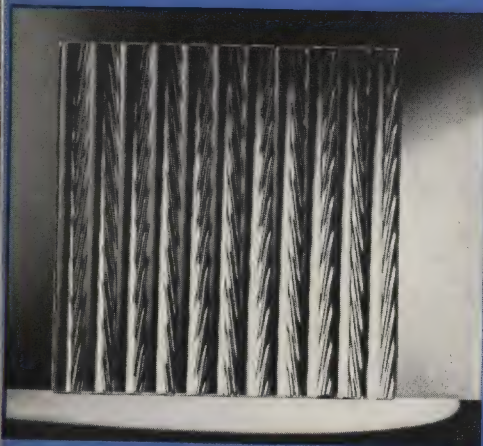
Double glazing one light of Polished Louvrex with lines running horizontally imposed over one with lines turned at an angle.



Single section of Polished Flutex with pattern lines running vertically.

REEDEX GLASS

AN INTERESTING NEW
PATTERN OF
DIRECTIONAL DESIGN



Section of Reedex glass with pattern lines running vertically.

CROSS SECTION OF REEDEX PATTERN



1/2 Actual Size



Reedex Satinol Finish used in side door panels glazed vertically in the home of Joseph Henry Jackson, Berkeley, Calif. Michael Goodman, architect.

● First introduced to architects and builders two years ago, Reedex has a unique and charming pattern made up of a series of $\frac{1}{2}$ " corrugations on the ridge of which is an interesting herringbone design. Viewed as a whole, Reedex, as the name implies produces a reed-like effect that makes it ideally suited to modern design.

Reedex is high in light transmission and but slightly more obscure than either Louvrex or Flutex. And like those patterns, it is stocked in three different types of surface finish on the flat side; Fire Polished, Mechanically Ground and Polished and Satinol Processed.

Reedex may be glazed with the pattern running horizontally or vertically, in any size up to 54" x 136".* It is, therefore, a flexible medium with which modern streamlined effects may be achieved without resorting to numerous joints.

The more obvious uses for Reedex are found in windows, doors, vestibule panels, transoms and partitions. However, because of its novel pattern, Reedex is particularly suitable for effective display lighting of both interiors and exteriors. In theaters, cocktail lounges and dining places where gayety and brilliance is the keynote, Reedex can be used effectively in the decorative scheme.

*Pattern runs parallel with 136" edge.



● A dining room door glazed with Satinol Flutex. Note the interesting effect obtained by alternating the directional lines of the pattern.

Printed in U.S.A.

MEMO

The following 8 pages are our presentation to Mr. and Mrs. Home Builder on the use of Quality Hardware. It too is your presentation on Quality Homes. Reprints are available, write

McKINNEY MANUFACTURING CO., Pittsburgh, Pa.

P.S. Please note free Furniture Cutouts—page 8. Write us for your requirements.

HOW TO SELECT

the right hardware FOR YOUR HOME

by McKINNEY



This section is designed to make it easy for you to select the hardware for your home. The McKinney CHECK LIST offers a simple method to guide you along the lines of better building practice and protect you against false economies and costly mistakes.

Your architect and dealer will gladly help you in the selection of designs—and you will find your new home will give you a greater sense of pride and

beauty with McKinney Forged Iron Hardware used throughout.

McKinney Hardware offers everlasting beauty and lifetime endurance to the humble cottage, the medium priced home or the stately mansion. It is priced within reach of every home owner and is finished according to U. S. Government specifications for rust resistance—a factor important to home maintenance.

25 Years designing and manufacturing **GOOD HARDWARE**

THE IMPORTANCE OF GOOD HARDWARE TO YOU

Good Hardware gives a home owner complete and lasting satisfaction. It is designed by competent craftsmen to blend in with accepted architectural motifs. It has a definite function to perform — and should do its job with the utmost of efficiency.

Good hardware on the entrance door helps symbolize "The Friendly Doorway." Of neces-

sity, the door knocker and handle command first attention of visitors and make a lasting impression.

Appropriate hardware used intelligently throughout the interior of the home lends warmth and charm. It reflects good taste and types the owner as one who gives thought to the details of better living.

WHAT YOU SHOULD PAY FOR HARDWARE

Good building practice dictates that 2% of the cost of the home should be set aside for hardware. And builders who look to the future agree that quality hardware further enhances the resale value of every home.

Many home owners neglect the importance of hardware even to the point of appropriating more money for wall paper, interior painting, etc., which are subject to change in three or four years.

Cheap shoddy hardware of pot metal costs about one-third less than good hardware. Replacement is a costly operation; and you will find *quality hardware* your best investment for appearance, wearability and convenience.

McKINNEY DESIGNS

Architectural style and hardware design are definitely related. The same influences which led to the creation of architectural styles popular today also led to the creation of hardware designs which were suitable to compliment the architectural motif.

Hundreds of designs may be called English, French, Mediterranean or American-Colonial. Hardware of the early days was fashioned by the local craftsman and his design may have varied somewhat from those of his neighboring contemporaries. The McKinney designs are the result of careful research into many of these patterns and were selected to best represent the time and country that gave them birth.

THE READY-BUILT HOME

If you buy your home already built, be sure to *check the hardware*. Quality hardware is a good indication of quality building. If cheap hardware has been used, it is not unfair to assume that the builder has also deliberately cheapened on hidden items — those which are behind plaster and paint.

Let the McKinney CHECK LIST help to guard you against "Jerry-Builders".

STANDARD AND SPECIAL FINISHES

McKinney Forged Iron is available in two finishes: Swedish Iron and Dull Black.

McKinney Forged Iron maintains its beautiful finish and surface permanently, and there is no need for the troublesome polishing and touching up required by most hardware.

Every piece of McKinney Forged Iron has been thoroughly rustproofed in accordance with the best modern practice, and conforms to U. S. Government Standards plus.

What to look for in a Home

THE McKINNEY HARDWARE CHECK LIST FOR THE WELL APPOINTED HOME

- ☐ **DOES THE HARDWARE MATCH THE ARCHITECTURAL DESIGN OF THE HOME?** Hardware of incorrect design is as out of place as a high silk hat on a man in business clothes. Hardware of *correct* design should be of pleasing proportion in size and weight and *blend* into the architecture as a whole.
- ☐ **IS YOUR MAIN ENTRANCE A FRIENDLY DOORWAY?** A friendly doorway is a picture in itself. It says welcome to guests before you do—because it is here that the guest comes into contact with the details of your home for the first time. A friendly doorway is a warm welcome to all and warrants your careful attention to quality hardware.
- ☐ **ARE ALL OF YOUR EXTERIOR DOORS, INCLUDING GARAGE DOOR, EQUIPPED WITH CYLINDER LOCKS?** Cylinder locks have flat keys that fit conveniently into your pocket or purse. Cylinder locks assure maximum security and convenience, as they can be keyed alike so that one key will open all doors—front, side, rear and garage. A lock that can be operated with a 10 cent skeleton key offers no protection.
- ☐ **DOES YOUR INTERIOR HARDWARE MATCH?** It should match the exterior hardware in design and thus "follow through" the complete architectural motif. It should be a definite part of your interior decoration—and properly related, becomes the jewelry of your home.
- ☐ **DOES EVERY DOOR HAVE THREE HINGES?** Large expanses of wood will warp, and a warped door can be avoided with proper hardware. One small hinge placed in the center of every door in your home is an inexpensive safeguard against warping.
- ☐ **DO YOU HAVE CHROME-PLATED HARDWARE IN YOUR BATHROOM AND KITCHEN?** Your bath and kitchen plumbing fixtures are chrome-plated over brass. Your hardware should match. Remembering the nickel-plated automobile radiators of a few years back and how black and dingy they soon became, you should insist on chrome-plated hardware to maintain its sparkling appearance indefinitely.



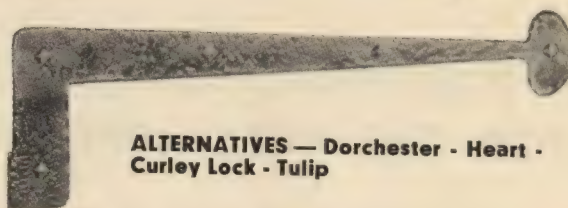
THE FRIENDLY DOORWAY . . .
MAKES LASTING IMPRESSIONS

McKinney Forge

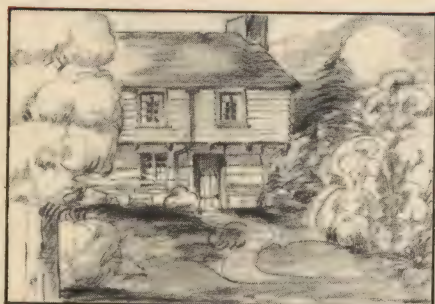
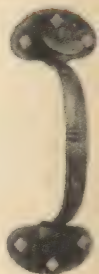
CONSULT THIS CHART FOR EASY SELECTION



CAPE COD BEDFORD DESIGN



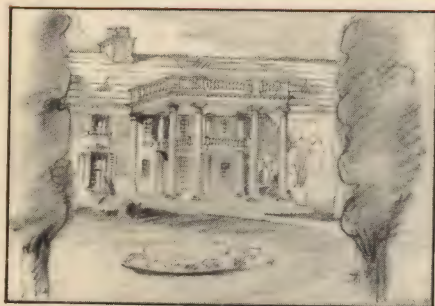
ALTERNATIVES — Dorchester - Heart -
Curley Lock - Tulip



NEW ENGLAND COLONIAL . DORCHESTER DESIGN



ALTERNATIVES—Bedford - Curley Lock
Heart - Tulip



SOUTHERN COLONIAL HEART DESIGN



ALTERNATIVE—Bedford



MEDITERRANEAN ALHAMBRA DESIGN



ALTERNATIVE—Etruscan



COTSWOLD WARWICK DESIGN

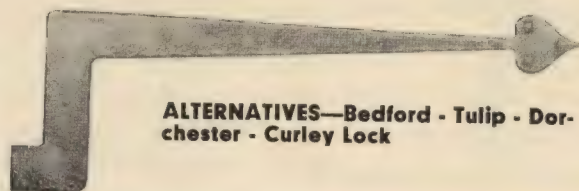


Iron Designs..

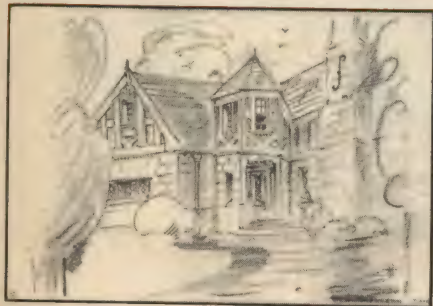
THERE'S A STYLE AND PRICE TO FIT YOUR HOME



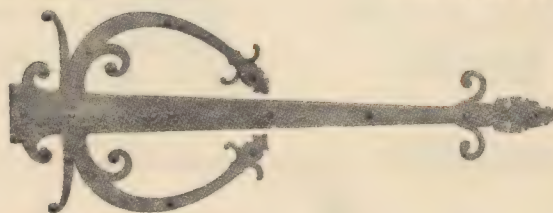
PENNSYLVANIA FARM HEART DESIGN



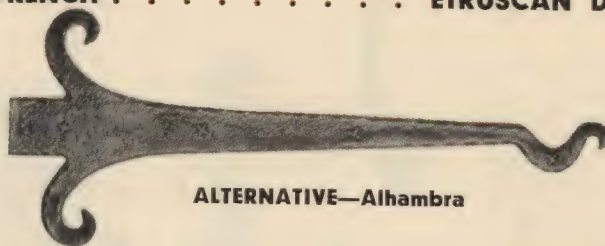
ALTERNATIVES—Bedford - Tulip - Dorchester - Curley Lock



TUDOR ENGLISH WARWICK DESIGN



FRENCH ETRUSCAN DESIGN



ALTERNATIVE—Alhambra



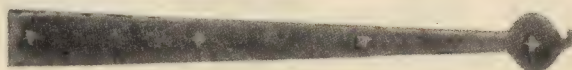
DUTCH COLONIAL TULIP DESIGN



ALTERNATIVES—Heart - Curley Lock
Bedford - Dorchester



AMERICAN FARM CURLEY LOCK DESIGN



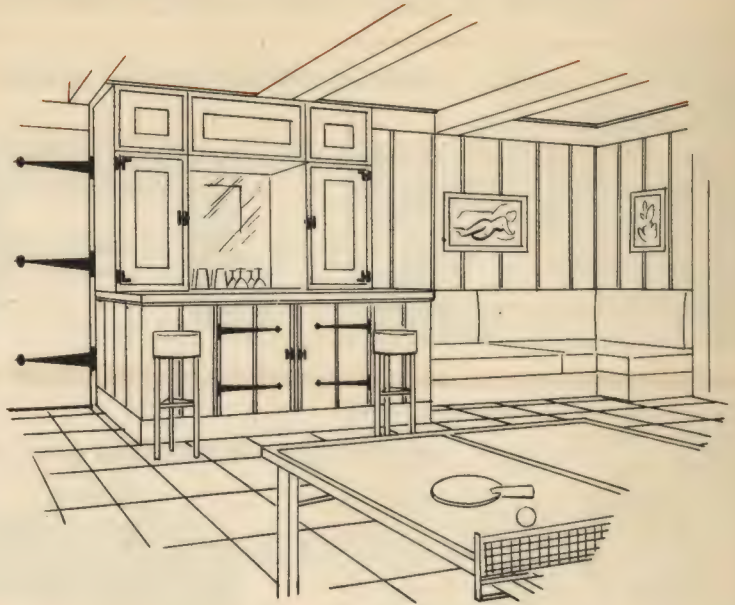
ALTERNATIVES—Heart
Bedford - Dorchester



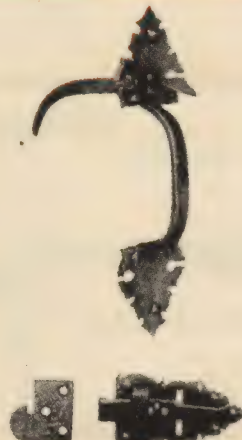
Interior and Cabinet Hardware

Hardware is one medium by which it is possible to tie exterior and interior together into the general architectural theme. Interior hardware should not only *blend in* with the interior decorative scheme, but should help to tie the interior into the architectural motif. Certainly it is not good taste to depend upon a "hodge podge" of irrelevant designs to be the jewelry of your home.

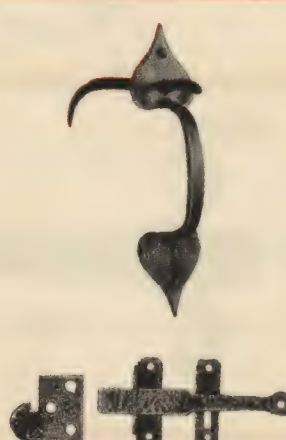
Careful attention to your hardware while planning the home is a definite step toward complete satisfaction.



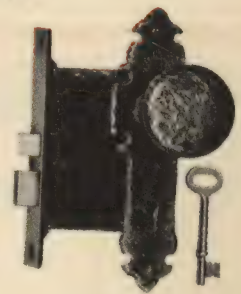
MORTISE LATCH



LOCKING LATCH



RIM LATCH



INTERIOR LOCK



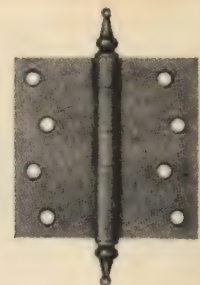
CABINET
HINGE



CABINET LATCH



LEVER HANDLE



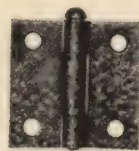
BUTT HINGE,
STEEPLE TIP



"L" HINGE



"H" HINGE



CABINET BUTT
HINGE



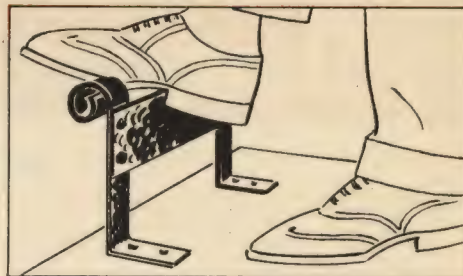
CABINET KNOB



DRAWER PULL
SASH LIFT

Accessories Important to your Home

With the beginning of landscaping operations you will find a foot scraper a necessary protective measure to your new home. McKinney foot scrapers are built to last and are the ready answer for children and visitors who innocently track in mud. Flat door mats do not reach mud collected on the instep.



MAIL BOXES



FORGED IRON

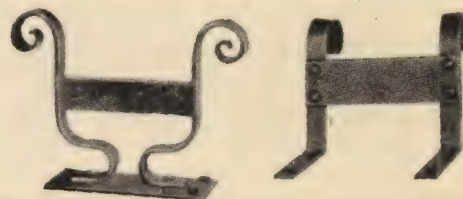


FORGED IRON



SOLID BRASS,

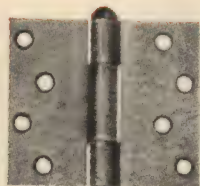
FOOT SCRAPERS



SHUTTER HARDWARE



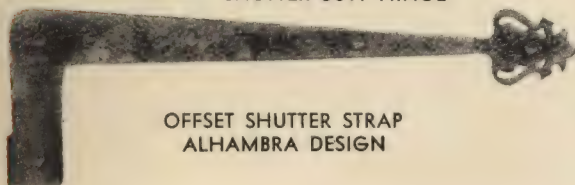
SHUTTER BUTT HINGE



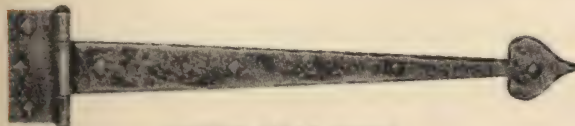
SHUTTER BUTT HINGE



SHUTTER DOG



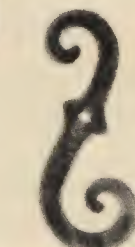
OFFSET SHUTTER STRAP
ALHAMBRA DESIGN



SHUTTER STRAP HINGE
HEART DESIGN



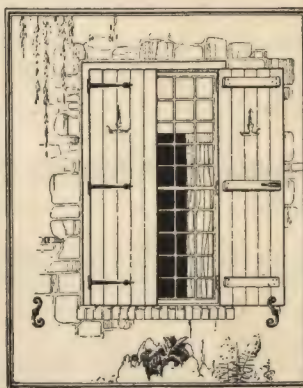
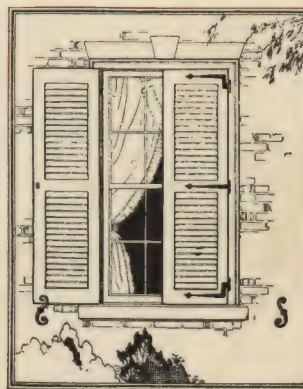
SHUTTER STRAP
TULIP DESIGN



SHUTTER DOG



DETAIL SHOWING
USE OF ANTI-
RATTLE HOOK
No. 12826



McKINNEY LIFETIME HARDWARE

OFFERS BEAUTY AND CHARM
WITH EVERLASTING SERVICE

To new home owners and those planning homes — we offer our sincere congratulations and best wishes.

To those who love the warmth and sincerity of old-fashioned things, McKinney offers pieces of genuine forged iron that reflect the friendly glow and rugged simplicity of age old forged iron.

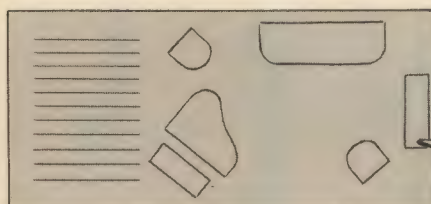
The true value of any product is the company

behind it, and we believe that it is this respect for true values that has made possible for us over 75 years of uninterrupted business — designing and making quality hardware.

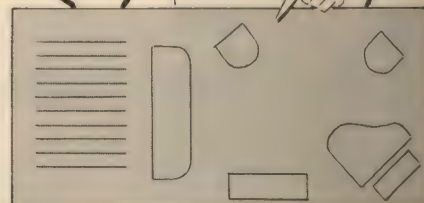
Every piece of McKinney Forged Iron is backed by this 75 years experience, and the name McKinney on your hardware is a pledge of TRUE VALUE that has been kept with thousands of home owners.

PLAN YOUR INTERIORS WITH McKINNEY FURNITURE "CUT OUTS"

Send now!



DRAWN TO SCALE, EASY TO USE. IT'S FUN TO PLAN YOUR INTERIOR THIS PRACTICAL WAY. These paper Cut-Outs of furniture are drawn $\frac{1}{4}$ " to the foot, the same as most blueprints. There is no need to guess whether the large sofa will fit a given space or whether your piano will fit in a particular corner. McKinney Cut-Outs will tell you accurately the relation between furniture and room sizes.



McKINNEY MANUFACTURING COMPANY
PITTSBURGH, PA.

Please send me "Furniture Cut-Outs" as offered.

Name.....

Address.....

Hardware Dealer.....

McKINNEY
MANUFACTURING
COMPANY

DESIGNERS AND MANUFACTURERS
OF GOOD HARDWARE
FOR 75 YEARS
PITTSBURGH, PA.

SMALL
HOMES
OF STUCCO
CONCRETE
AND BRICK

MEDUSA

12

PRODUCTS



for making

BETTER SMALL HOMES

No matter how small the home, its owner is entitled to and should have "top notch" construction and best materials. The 12 Medusa products, whose uses are described in these four pages, give owners of small homes this better construction and materials to which they are entitled, at little or no extra cost.

MEDUSA WHITE PORTLAND CEMENT FOR SMALL STUCCO HOMES

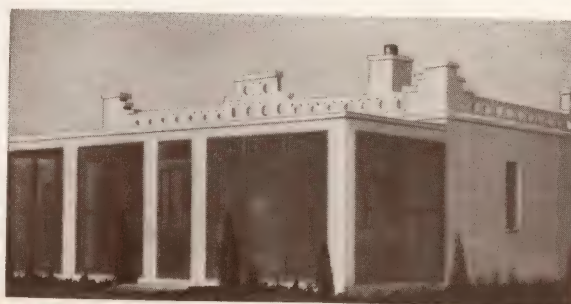


Stucco made with Medusa White, the original white cement, offers the builder and owner of small homes many advantages. Medusa White is a true white, non-staining cement that can be colored and used in an unlimited number of textures to harmonize with any style of architecture or setting of the house. In making stucco for the small house, builders use Medusa Waterproofed Gray Portland Cement for the first and second coats, and Medusa White Portland Cement for the finish coat. Write for copy of book on Medusa White Portland Cement Stucco.

SMALL HOMES OF CONCRETE BLOCK AND BRICK MADE WITH MEDUSA CEMENTS Today small houses built of concrete units have come into their own. The old "rock-faced" concrete block house has given way to modern methods in the present concrete house. Today the small, light-weight and uniformly smooth concrete, cinder and light-weight aggregate blocks, and concrete bricks in many colors and textures, meet all demands for architect-



tural style. These concrete units and concrete brick are made of Medusa Plain or Waterproofed Gray Portland Cement. Some manufacturers are facing concrete blocks with Medusa White Cement and with Medusa White Cement colored.



CONCRETE
STUCCO OR
BRICK
EXTERIOR



HOW TO

CONCRETE, STUCCO OR BRICK EXTERIORS



A widespread practice in the small home field is to use Medusa Portland Cement Paint on exteriors of brick, concrete brick, stucco, concrete, cinder or light-weight aggregate block homes. This gives them a permanent beauty and protection. It also gives a colorful interior finish to concrete, cinder or other interior block walls.

Medusa Paint, being made with cement which is the same basic material as contained in the wall itself, penetrates the tiniest pores, keying itself to the wall and making a hard cement-like finish that is permanent, beautiful and water-resisting. This paint prevents water from penetrating the wall, freezing and causing tiny cracks which, in turn, may enlarge, ruining the wall.

Medusa Paint is unusually economical. It is mixed with water instead of expensive oil or dryers. Requires no undersealer or special treatment. It has excellent coverage and is low in first cost. It can be brushed or sprayed on the wall, and can be applied to any masonry surfaces, damp or dry, with the exception of vitreous tiles. It comes in white, black,

cream, stone gray, pearl gray, Spanish buff, green, blue and red. A copy of "How To Paint Concrete, Stucco, Masonry and Other Surfaces" will be sent upon request. Also chip folder showing colors.

MEDUSA-LITE, AN INTERIOR PAINT

Medusa-Lite, a casein paint, is ideal for decorating the interior walls of small homes. In most cases one coat covers; it is easy to apply, dries quickly, is economical and gives a truly beautiful, durable flat finish. It can be used on plaster, concrete, brick, tile, stone, insulating board, wood or wall-board. It is not recommended, however, for a room subject to excess moisture or condensation. Medusa-Lite covers 300 to 700 square feet per gallon, depending upon the surface. It requires no sizing or previous treatment of surface. It comes in paste form and is thinned with water. It dries to the touch in an hour's time. Medusa-Lite can be had in white and seven beautiful pastel shades. Write for color chip folder.



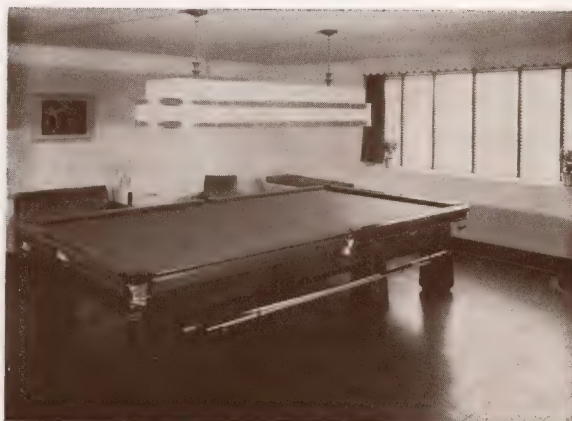
PAIN T



BASEMENTS
AND
RECREATION
ROOMS



BASEMENT AND RECREATION ROOM WALLS AND FLOORS



A beautiful basement is a big sales factor for the small home. At a very small cost the small home basement can be made into a beautiful, livable part of the house. Basement or recreation room walls, whether of brick, concrete, unglazed tile or masonry units, can be inexpensively beautified with Medusa Portland Cement Paint. This paint is applied to dry or damp walls or to concrete or masonry construction before it is dry. A few gallons of Medusa Paint transforms a basement from a dirty, damp "catch-all" to a light, clean, cheerful, livable room. Write for a copy of the book "How To Paint Concrete, Stucco & Masonry Surfaces". Also a color chip folder.

MEDUSA FLOOR COATING

Painting concrete floors usually presents a problem. Dampness absorbed from underneath the floor or water dripping from overhead pipes unites with the alkalis in the concrete, and causes the average oil or varnish base paint to saponify, hence quickly chip or peel off. Medusa Floor Coating overcomes

this difficulty and makes a colorful finish. It is unaffected by water or alkalies. Medusa Floor Coating is easily applied and has excellent coverage. It dries ready for use in 24 hours. It can be had in black, white and six attractive colors. Write for complete information including color chip folder on Medusa Floor Coating.

TERRAZZO FOR RECREATION ROOM FLOORS

Today we find well designed, colorful terrazzo floors being laid in recreation rooms, bathrooms, kitchens, and vestibules. Terrazzo can be had in most any color or design. It is made with Medusa White Portland Cement in which are colored marble chips forming beautiful designs. Terrazzo makes a floor that is easy to clean, extremely durable, bright, lively and colorful. Terrazzo needs no rugs or other floor covering. It is always beautiful and in the long run it costs only slightly more than other types of floors.



How MEDUSA WATERPROOFED PORTLAND CEMENTS MAKE A WATERPROOF HOME

Every small home should be waterproofed throughout. Waterproofing a home is comparatively simple and costs surprisingly little, yet assures dry interior walls and a basement free from dampness. To waterproof the basement, all footings, foundation and basement floors are made with Medusa Waterproofed concrete and mortar. This waterproofing lines the pores of the concrete with a water repellent lining that repels all water at the surface.

Concrete foundations, whether poured or blocks, should be waterproofed. Masonry units of all kinds should be set in waterproofed mortar. Above grade, if the walls are constructed of concrete, cinder or light-weight aggregate blocks or concrete brick, these units should be waterproofed and should be laid up in a waterproofed mortar. If it is a brick home, all mortar should be made with Medusa Waterproofing or the brick should be set in Medusa Brikset.

Medusa Waterproofed Gray Portland Cement is a regular gray Portland cement with the correct amount of waterproofing ground in during the process of manufacture. In some territories where Medusa Waterproofed Gray Portland Cement is not available, then Medusa Waterproofing Powder or Medusa Concentrated Waterproofing Paste should be used. Medusa Waterproofings have a satisfactory



service record of over 30 years.

In making stucco for the small home, the first and second coats should be made with Medusa Waterproofed Gray Portland Cement and the finish coat with Medusa Waterproofed White Portland Cement. Medusa Waterproofed stucco repels moisture at the surface and prevents water containing dirt from being absorbed into the stucco, causing the stucco to stain. Stucco with a finish coat of waterproofed white Portland cement can easily be washed.

Again let us emphasize the fact that the cost of waterproofing a home throughout is very small, only a fraction of the cost of trying to repair leaky basements or walls. A copy of the book "How To Make Good Waterproofed Concrete" will be sent upon request.

MEDUSA CEMENTS *for* SPECIAL PURPOSES

MEDUSA "MEDCO" HIGH EARLY STRENGTH CEMENT has all the properties of standard gray Portland cement but has the normal 5 to 7 days strength in only 24 hours. It is ideal for concrete work that is needed in a hurry, and for winter building.

BRIKSET Medusa Brikset is a waterproofed masonry cement that has minimum strength, obtains a high early strength and can be

used with or without colors. It should be used in laying up face brick.

MEDUSA STONESET CEMENT
This is a non-staining, waterproofed mortar cement for setting, pargeting and pointing of cut stone and is used for laying up face brick. It is also used for mortar in the backup wall. Write today for complete information and literature on any or all of the products described in these four pages.

MEDUSA PORTLAND CEMENT COMPANY

1000 MIDLAND BUILDING—DEPT. S.H.

CLEVELAND, OHIO

"Many of my friends are so sold on their Milcor constructed homes, they suggested I see you about the home I want to build."



How to Plan
and Build Homes
that are
easy to sell...

and win good will

with *MILCOR* Fireproof Building Products

This compact 4-page manual of Milcor steel fireproof building materials is written to help you to do a more consistent job of designing homes that give owners greater satisfaction . . . add to your chances of success in selling small homes, yet add little, if any, to the construction costs.

Milcor provides so great a range of individual products, types, weights, metals, etc., that you can rely on this one dependable source for the right product to

meet every condition in fireproof construction. Ready-to-ship stocks carried at nine quick-delivery points.

Do as so many architects and builders now do—specify and use famous Milcor products for fire-safe homes that are a credit to you.

Read the next three pages carefully. When you get to page 4, check the reply card for your free copy of the Milcor Manual, a practical reference book on fire-proof construction.



Specify Steel as the Backbone of Walls and Ceilings.

1. Milcor Stay-Rib Metal Lath in ceiling.
2. Milcor Cove Lath.
3. Milcor Expansion Corner Bead.
4. Kuehn's Specialmesh Metal Lath in walls.
5. Milcor Metal Window Stool.
6. Milcor Metal Base with Expanded Metal Wing.

MILCOR STEEL COMPANY

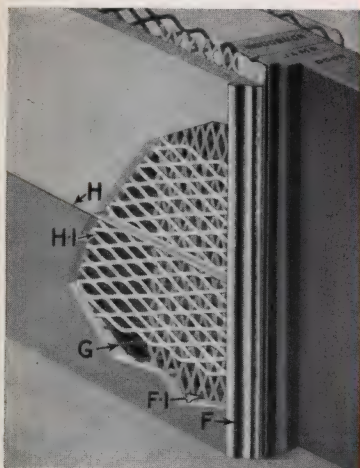
MILWAUKEE, WISCONSIN

CANTON, OHIO

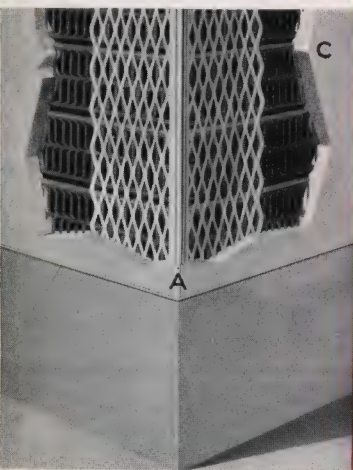
CHICAGO, ILL. • KANSAS CITY, MO. • LA CROSSE, WIS. • ATLANTA, GA.
• NEW YORK, N. Y. • ROCHESTER, N. Y. • BALTIMORE, MD.



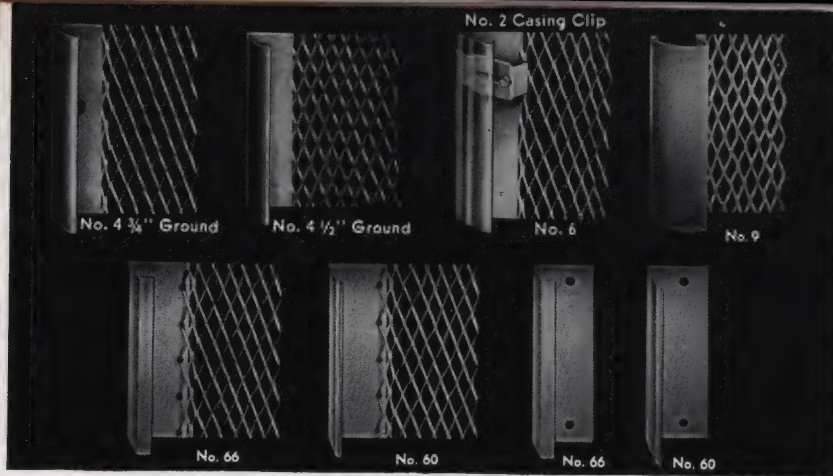
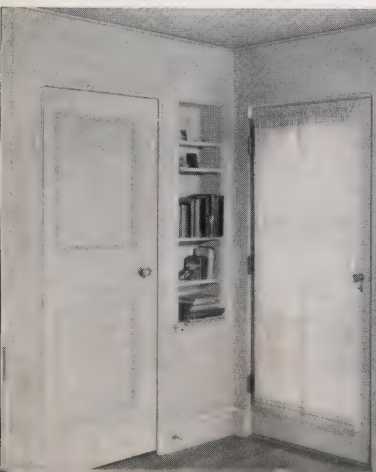
Illustration below shows: H—Nose of Base Screed; H-1—Expanded Metal on Base Screed; G—Metal Lath in Wall; F-1—Expanded Metal on Casing; F—Surface of Door Casing.



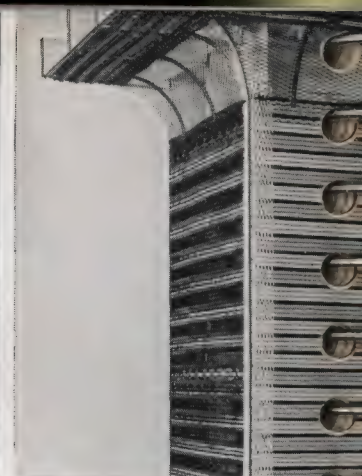
Application of Milcor Expansion Corner Bead in illustration below: A—Expansion Corner Bead; C—Plaster over Metal Lath.



Milcor Casing gives neat, trim effect in keeping with finest interior design.



Milcor Expansion Casing is made in a variety of styles, a few of which are illustrated above.



Only Milcor offers a Cove Lath ready to install, ending fussy, costly hand labor on the job.

You can stake your reputation on **MILCOR** Expansion Products

Part of the Milcor fireproof system that insures permanent plaster beauty and an enthusiastic home owner

Milcor originated and patented Expansion Corner Bead and provides everything you need, in all types of expansion products, to meet any structural condition—makes it so you can depend on it to back up all your claims.

Your interior details can't name a Corner Bead, Picture Mould, or Base Screed that Milcor doesn't carry as a stock item. Only Milcor offers a Cove Lath ready to install.

Milcor's integral web of expanded metal reinforces corners against unsightly cracks, chipping, or cleavage. The job stays new-looking—a credit to your reputation years from now.

Wherever plaster plays an important part in construction, recommend and use Milcor Expansion Products.

★ ★ ★

Milcor Expansion Door and Window Casings—with 1" or less of exposure—give the effect of spaciousness to rooms in small homes . . . and the permanence of firesafe metal trim . . . Casings are tied into plaster by expanded metal flanges, doing away with the usual hairline cracks. There is less warping and misfitting. . . The cost of a first-class finished job is actually less than with other materials.

Expansion wings reinforce plaster around door or window casing.



Wall crypt and arches made with Milcor Expansion Corner Bead.

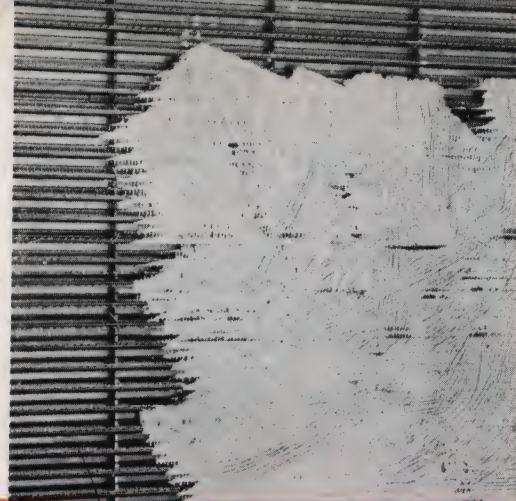


Bead easily formed to many shapes; does not lose reinforcing value.





A good plastering job, reinforced with steel, makes the finest wall.



The scratch coat of plaster is forced through the metal lath so that it is "keyed" on both sides of the steel reinforcing.



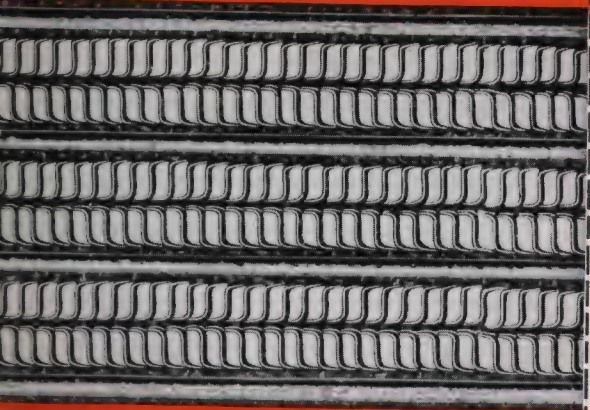
Note how plaster has been forced through lath to such an extent that when dry and hardened it becomes permanently "clamped" to the steel.



Netmesh Metal Lath.



Kuehn's Specialmesh Metal Lath.



No. 1 Stay-Rib Metal Lath.

See other side for information about free, colorful bulletins this card brings you.

MILCOR Metal Lath

assures home owners of fire-safe plaster interiors that stay looking new

It pays you to specify and build with plaster-on-steel, to please home owners with plaster interiors where long-time plaster beauty is assured.

And it pays to specify Milcor when you let a sub-contract for plastering, or buy metal lath from your dealer. You know he can supply the *right* product for the job from Milcor's complete line. Designed for quick, easy handling . . . maximum rigidity with light weight . . . permanent plaster grip without plaster waste.

For satisfactory work that stands up—puts your homes into the quality class—build with plaster-on-steel. For faster, smoother jobs, specify Milcor Metal Lath.

FIRST CLASS
PERMIT No. 1192

Sec. 510, P. L. & R.
MILWAUKEE, WIS.

BUSINESS REPLY CARD

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

2c POSTAGE WILL BE PAID BY

MILCOR STEEL COMPANY

South 41st & West Burnham Sts.

Milwaukee, Wisconsin

All the advantages of **hollow partitions** . . . *substantial savings in costs* with the **MILCOR Steel Stud**

Wherever light weight and extreme strength are factors in design, you please home builders and buyers—satisfy your own good judgment—with this economical construction. . . . The Milcor Steel Stud—with Milcor Metal Lath—forms a rigid hollow partition that goes up fast, holds down costs. . . . One standard unit serves as studding, ceiling runner, floor track—to eliminate confusion with materials, save time on

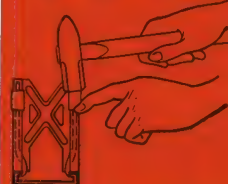
the job. . . . Easy installation of pipes, conduits, etc. . . . Provides important advantages—one to two hour fire rating, depending on plaster used . . . resistance to earthquakes, violent impacts . . . effective barrier to sound . . . immunity from swelling, warping, or splitting due to moisture, thus assuring long-time plaster beauty. . . . So for the added satisfaction of plaster-on-steel partitions, specify Milcor Steel Studs.



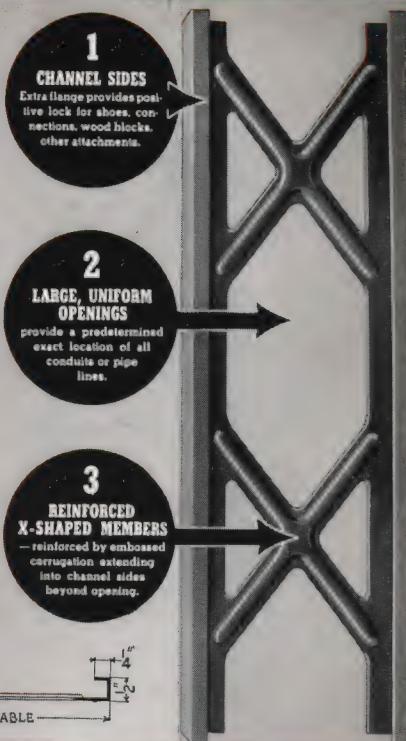
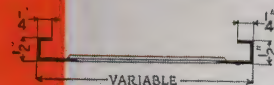
Shoe is Slipped into Channel Sections of Floor Runner and Stud as Shown



Shoe is Wedged into Floor Runner by Tapping with Hammer



Clips Slip Around Channel Sections and Shoe Arms—Wedged Tightly with One Blow of Hammer.



Free, Colorful Bulletins Available for mailing to your prospects

Milcor Manual—Describes in detail the design and application of the many Milcor inexpensive steel construction materials and points out their many advantages to the builder who wants to stay in business.

Home Owners' Catalog—Colorful booklet that shows prospects why it is good business to build or buy homes of fire-safe, steel construction. (Exact copy of Booklet sent to all home builders by F. W. Dodge Co. with Home Owners' Catalogs.)

Check the reply card below to have sample copies of these two booklets sent to you. See if you don't agree that here is material that can help you sell more better homes . . . give prospects a feeling of greater confidence in your plans and specifications. Then write us for reasonable quantities for your own mailing—furnished free!



MILCOR STEEL COMPANY,
S. 41st and W. Burnham Sts.,
Milwaukee, Wisconsin.

Please send me the following free literature which I have checked:

- ☐ Milcor Manual ☐ Home Owners' Catalog
☐ Milcor Steel Stud Manual

Name.....
 Company.....
 Address.....
 City.....State.....

Post Card
Tear off and
mail today!

MILCOR STEEL COMPANY
 MILWAUKEE, WISCONSIN CANTON, OHIO
 CHICAGO, ILL. • KANSAS CITY, MO. • LA CROSSE, WIS. • ATLANTA, GA.
 • NEW YORK, N. Y. • ROCHESTER, N. Y. • BALTIMORE, MD.

ROOF INSULATION
ROLL ROOFINGS
SHINGLES
COATINGS & CEMENTS
ASPHALT
BUILDING PAPERS
BUILT-UP ROOFING
ACOUSTICAL TILE

MODERN DEMANDS FOR
modern living
REQUIRE
Modern Materials
IN
Modern Homes

INSULATION BOARD
INSULATION PLANK
COLD STORAGE INSULATION
INSULATING TILEBOARD
INSULATING LATH
INSULATING WALLBOARD
INSULATING SHEATHING
ROCK WOOL INSULATION

THESE **MODERN Co PRODUCTS**

MEET THE DEMANDS FOR

ROOFS EXTERIOR WALLS INTERIOR WALLS FLOORS
INSULATION ACOUSTICAL SOUND ABSORPTION

EXTRA!
EXTRA!!

Introducing—



FORT WAYNE
JOURNAL-GAZETTE
PRODUCTION
NEW BRICK
SIDING HERE

According to E. C. Shirley, head of roofing and siding department of the Fort Wayne Builders' Supply Company, they have just recently introduced a new brick siding which is noted for its superiority, namely, Modern Bric Siding, which is an improved insulated brick siding.

Modern Bric Siding, which resembles actual brick as close as is seemingly possible, is weather-proof, moisture-proof, water-proof and termite-proof. It will not bulge or distort. This siding is given special attention at the factory by the craftsmen when it is being manufactured.

It's the latest bric siding on the market, far improved over the average bric siding!

MODERN BRIC will not bulge or blister and is weather-proof, moisture-proof, water-proof, and termite-proof. It is made of the finest quality material by expert craftsmen.

The next time you go out for a drive go past the home of Mr. and Mrs. H. C. Wood, located at 1425 E. Columbia. Their home has just recently been resided with MODERN BRIC.

Call A-2233 for more information on this new siding which is causing such a sensation. . . FREE estimates also furnished without any obligation!

Sold Exclusively in Fort Wayne, by the

Fort Wayne BUILDERS SUPPLY Company
Dial A2233 840 Hayden St.

HERALD-TELEGRAM.
CHIPPEWA FALLS, WIS.,
**Lumber Co. Secures
New Type Material**

The O and N Lumber Co. have announced they have secured the exclusive distributorship of Modernbric, an insulating brick siding.

John Norris, local manager of O and N, says that this material will revolutionize the modernizing of old homes and buildings. "This material not only completely insulates a building, but eliminates painting for a long period of years," said Norris. "Its appearance on the building simulates actual brick, but is less costly, and easier to apply."

Modernbric was developed by the Modern Building Materials Co. of Chicago.

The O and N Lumber Co. is constructing a model job in the city which is open for public inspection.

ANNOUNCEMENT

TO THE HOME OWNERS
OF CHIPPEWA FALLS
AND SURROUNDING AREA:

We have observed the market trend of insulating brick siding throughout the country for the past twelve months. We were at first hesitant in offering such a product to our prospective customers as we were not convinced that any of the brands of this material on the market came up to the high standards that we demand in any new product being offered to the public. After considerable investigation we determined that there is a definite public demand for a strong, durable, and attractive insulating brick siding. We therefore endeavored to secure the best siding now manufactured. We were successful in obtaining the exclusive agency of the newest and most improved product available—

Modernbric
THE IMPROVED INSULATING BRICK SIDING

SO THAT THE PUBLIC may see and examine this material under actual construction we are applying a model job in Chippewa Falls. You may see this demonstration job at 315 E. COLUMBIA ST. The public is cordially invited to examine this material and workmanship and ask any questions concerning its qualities and costs.

O&N LUMBER CO.

509 N. High St. Phone 971

**MODERN
BUILDING
MATERIALS
CO.**

111 WEST WASHINGTON STREET
CHICAGO, ILL.

MODERN Co

PRODUCTS

MODERNBRIC

The Insulating Siding

THE ECONOMIST
September 2, 1939

New Building Materials Company Opens Offices

Organization and establishment of the Modern Building Materials Company and the opening of new Company and modern headquarters in the Conway Building, 111 W. Washington Street, was announced this week by E. H. Batchelder, Jr., president of the company. The new enterprise has been in the process of organization and development since he resigned as senior vice president of the Insulite Company on May 1.

The company, which launched into active operation during August, is engaged in producing, selling and distributing building products and insulation materials. It specializes in asphalt treated and waterproofed materials.

In addition to supplying building materials, the company will devote much of its activity to low temperature insulation for all kinds of cold storage structures.

Sales Management

E. H. Batchelder, Jr., has resigned as vice-president and director of the Insulite Co., Minneapolis, to become vice-president in the new company for the past six years and recently played an important part in the company's entry into the insulated brick siding field.

WOOD CONSTRUCTION Batchelder to Direct New Chicago Company

After six years of service in executive capacities with The Insulite Company, Minneapolis, Minn., E. H. Batchelder, Jr., has resigned as senior vice president and director to become vice president of the American Rock Wool Corporation, national producers of rock wool insulation materials with large plants at Wabash, Indiana and South Plainfield, N. J.

Mr. Batchelder, who during the past year played a prominent part in Insulite's entry into the insulated brick siding business, will become the active head of a new company at Chicago engaged in the manufacture and sale of insulated brick siding and kindred products.

Mr. Batchelder, who came to Insulite when its operations were at an extremely low point, has been with the company during recent years in which it has risen to be a prominent factor in the insulation board and building industry.

CHICAGO SUNDAY HERALD AND EXAMINER
MAY 14, 1939

Batchelder Heads New Brick Co.

After six years of service in executive capacities with the Insulite Company, Minneapolis, Minn., E. H. Batchelder Jr. has resigned as senior vice president and director to become vice president of the American Rock Wool Corporation.

Mr. Batchelder, who, during the past year played a prominent part in Insulite's entry into the insulated brick siding business will also become the active head of a new company at Chicago engaged in the manufacture and sale of insulated brick siding and kindred products.

American Lumber
Assumes Executive Posts with
Two Insulation Firms

After serving for the past six years in executive positions with the Insulite Co., Minneapolis, E. H. Batchelder, Jr., has resigned as senior vice president and director to become vice president of the American Rock Wool Corp., national producer of rock wool insulation materials with plants in Wabash, Ind., and South Plainfield, N. J.

Mr. Batchelder, who played the past year during the past year in the entry of the Insulite Co. into the insulated brick siding business, will also become the active head of a new company in Chicago which is engaged in manufacturing and selling insulated brick siding and allied products.

The Insulite Co. has risen to a position of importance in the insulation board and building industry during the past few years while Mr. Batchelder has been in its service.

MODERN BUILDING MATERIALS CO.

111 WEST WASHINGTON STREET
CHICAGO, ILL.

HERE'S TO THE TEAM!

To My Fellow Team Workers:

It is a great pleasure to again find an opportunity to address you, my fellow workers, in the great building material industry, and especially through the medium of the initial issue of this very necessary data book.

After publicly and privately urging and advocating the establishment of team work and team methods throughout the building industry for four or five years prior to my resignation from The Insulite Company service, it is most gratifying to observe today on all sides evidence of the tremendous progress among all factors in the building industry toward unified and co-hesive team effort. The continuing announcements of expanded building activity and increase in building projects is partially attributable to the gain in team spirit and execution.

Above all, I desire to pay tribute to our good friends, the dealers, for their noble support of the industry as a whole and for the splendid manner in which they have taken hold of the signals and have carried the ball for the other parts of the team.

My greetings to all of the trade, and best wishes for bigger and better building sales.

Fraternally yours,

Modern Co
PRODUCTS

are
Distributed Thru
RETAIL LUMBER
and
BUILDING MATERIAL
DEALERS

Batchelder

MODERN BRIC

The Insulating Siding

DEMAND *Lifetime Service!*

for YOUR WOOD WINDOWS • FRAMES • DOORS

As you logically select wood products as the best assurance of value . . . as the final touch of architectural charm . . . as the most effective building material for beauty of finish, character of appearance, weather protection and economy, MAKE CERTAIN of obtaining the Maximum Value by demanding that your Wood Windows, Frames and Exterior Doors be branded with the N D M A Seal of Approval for Toxic Preservation.

Enlarged to show how Seal of Approval is electrically branded on wood products.



WHAT the SEAL OF APPROVAL MEANS

The **RESPONSIBLE SUPPORT of a GREAT INDUSTRY**

The N D M A Preservative Minimum Standards are controlled by an unbiased "Committee On Toxic Preservation" comprised of the leading authorities in wood preservation. Their sole aim is Protection for the buyers of Wood Products.

The use of the Seal of Approval is open to all manufacturers who can qualify with approved methods of effective toxic treatment. The preservative materials and processes of all licensees are inspected periodically to assure their adherence to the minimum standards. See next page for list of manufacturers now licensed to apply the N D M A Seal of Approval to their preservative treated products.

TO THE OWNER

- Assurance that the products which bear the Seal have been preservative treated in accordance with best commercial practices.
- Durability against fungus attack which results in decay or stain.

TO THE DEALER OR BUILDER

- Customer satisfaction.
- The added prestige resulting from the furnishing of products bearing an official Industry insignia.
- The merchandising help provided by a quality mark—like "sterling" on silver.

TO THE BANKER OR LOANING AGENCY

- The added security of longer life for windows, frames, and exterior woodwork.

NATIONAL DOOR MANUFACTURERS ASSOCIATION

332 SOUTH MICHIGAN AVENUE • CHICAGO • ILLINOIS

PROTECT YOUR INTERESTS...

SPECIFY THE NDMA SEAL OF APPROVAL

RECOMMENDED SPECIFICATIONS

Architects, builders, and owners who desire assurance of dependability in preservative treated millwork products are urged to incorporate the following in their specifications: "—* shall be preservative treated in accordance with the Preservative Minimum Standards of the National Door Manufacturers Association and shall bear the N D M A Seal of Approval."

Dealers can obtain stock prefitted windows, window and door frames, blinds, shutters, screens and storm sash bearing the N D M A seal of approval from jobbers in all sections of the country.

(*Windows, sash and storm sash when prefitted, exterior frames, exterior doors, blinds, shutters or screens.)

These Firms

are Licensed to Apply the NDMA SEAL of
APPROVAL to Preservative Treated Wood Products

ADAMS-ROGERS COMPANY
Indianapolis, Indiana

ANDERSEN CORPORATION
Bayport, Minnesota

ANSON & GILKEY COMPANY
Merrill, Wisconsin

ATLANTIC MILL & LUMBER COMPANY
Baltimore, Maryland

AUGUSTA LUMBER COMPANY
Augusta, Georgia

BIRMINGHAM SASH & DOOR COMPANY
Birmingham, Alabama

BUCKEYE SCREEN & WEATHERSTRIP CO.
Columbus, Ohio

W.M. CAMERON & Co., INC., WHOLESALE
Waco, Texas

CARNAHAN MANUFACTURING CO.
Loogootee, Indiana

CARR, ADAMS & COLLIER COMPANY
Dubuque, Iowa

COWSER & COMPANY
Dallas, Texas

CURTIS COMPANIES, INC.
Clinton, Iowa

FARLEY & LOETSCHER MFG. COMPANY
Dubuque, Iowa

GOSHEN SASH & DOOR COMPANY
Goshen, Indiana

HURD MILLWORK CORPORATION
Medford, Wisconsin

HUTTIG MANUFACTURING COMPANY
Muscatine, Iowa

HUTTIG SASH & DOOR COMPANY
St. Louis, Missouri
Jacksonville, Florida
Louisville, Kentucky
Charlotte, North Carolina
Columbus, Ohio
Knoxville, Tennessee
Dallas, Texas
Roanoke, Virginia

HYDE-MURPHY COMPANY
Ridgway, Pennsylvania

IRON CITY SASH & DOOR CO.
Pittsburgh, Pennsylvania

JORDAN MILLWORK COMPANY
Sioux Falls, South Dakota

KINZUA PINE MILLS COMPANY
Kinzua, Oregon

THE LONG-BELL LUMBER COMPANY
Kansas City, Missouri

THE R. McMILLEN COMPANY
Oshkosh, Wisconsin

MEMPHIS SASH & DOOR COMPANY
Memphis, Tennessee

METZ MANUFACTURING CO.
Dubuque, Iowa

MISSOULA WHITE PINE SASH COMPANY
Missoula, Montana

NORTHERN SASH & DOOR COMPANY
Hawkins, Wisconsin

PEASE WOODWORK CO., INC.
Cincinnati, Ohio

ROACH & MUSSER COMPANY
Muscatine, Iowa

ROCK ISLAND SASH & DOOR WORKS
Rock Island, Illinois

THE T. H. ROGERS LUMBER CO., WHOLESALE
McAlester, Oklahoma

SERLEY SASH & DOOR COMPANY
Minneapolis, Minnesota

SPOKANE PINE PRODUCTS COMPANY
Spokane, Washington

THE WEARN LUMBER COMPANY
Charlotte, North Carolina

WESTERN PINE MFG. CO., LTD.
Spokane, Washington

WHITE PINE SASH COMPANY
Spokane, Washington

WHITMER-JACKSON COMPANY
Buffalo, New York

NATIONAL DOOR MANUFACTURERS ASSOCIATION

332 SOUTH MICHIGAN AVENUE • CHICAGO • ILLINOIS



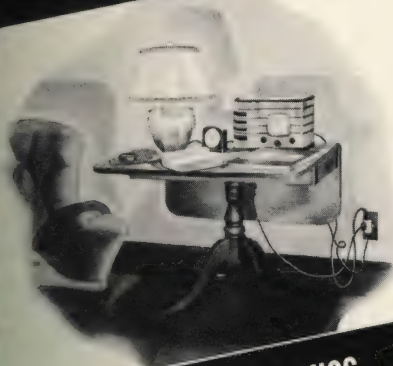
NO LONG CORDS



NO UGLY WALLS



NO DIRT



NO BASEPLUGS



NO REDECORATING

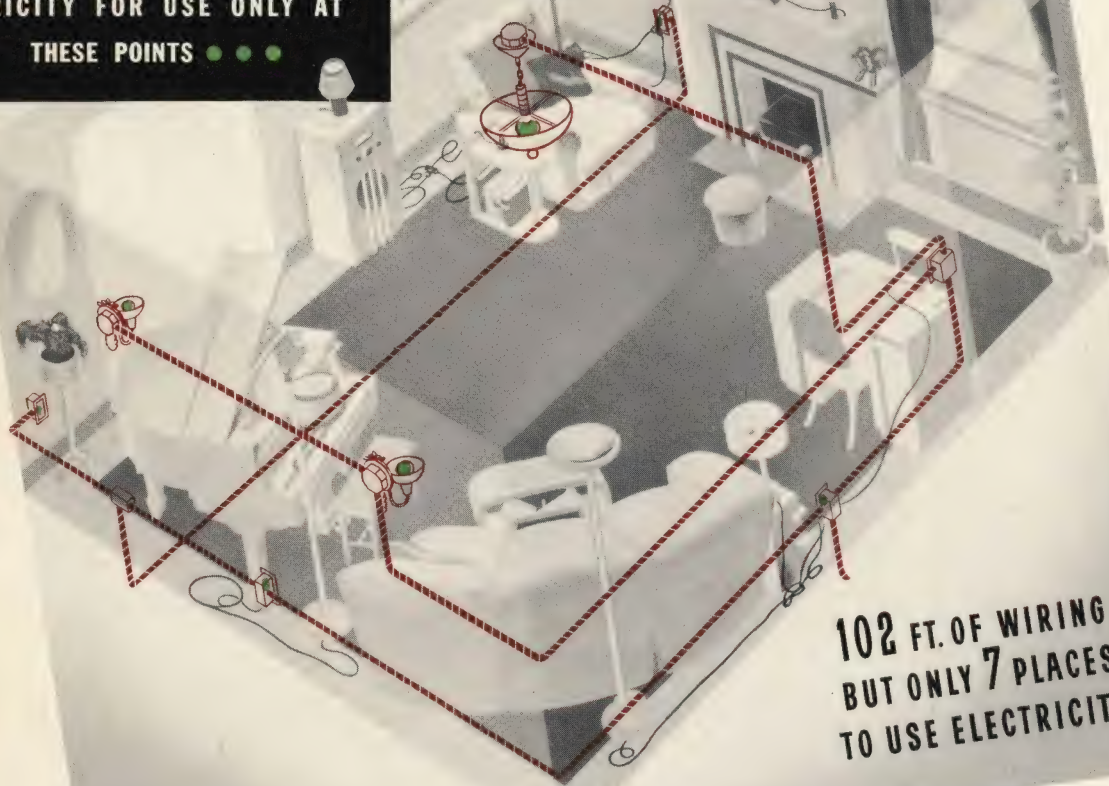


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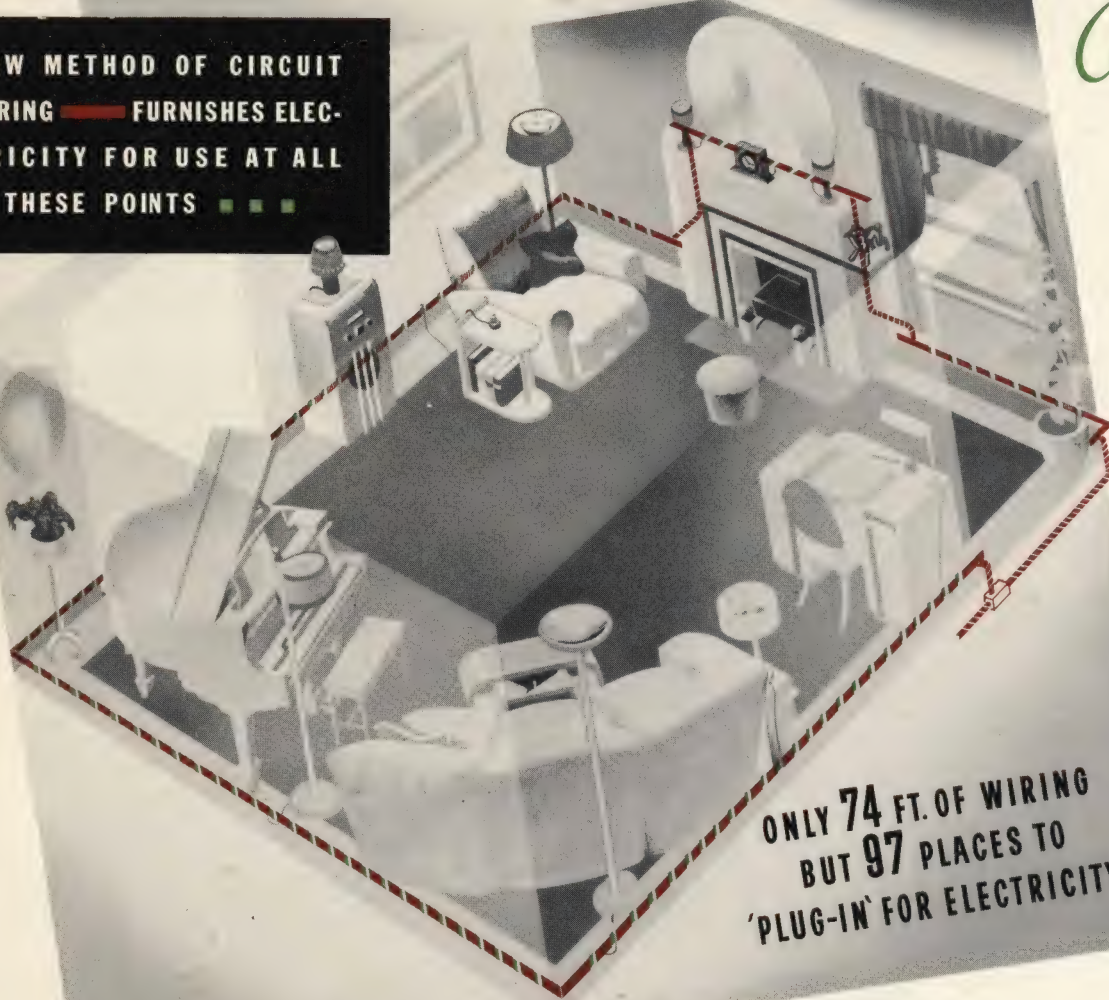
THE NEW WAY TO *Wire* A HOUSE

ORDINARY WIRING — BURIED
INSIDE WALLS FURNISHES ELEC-
TRICITY FOR USE ONLY AT
THESE POINTS ●●●



102 FT. OF WIRING
BUT ONLY 7 PLACES
TO USE ELECTRICITY

NEW METHOD OF CIRCUIT
WIRING — FURNISHES ELEC-
TRICITY FOR USE AT ALL
THESE POINTS ■■■



ONLY 74 FT. OF WIRING
BUT 97 PLACES TO
'PLUG-IN' FOR ELECTRICITY

*Eliminate
the wires
behind
walls—
Put them
on the
surface,
concealed
but usable
all around
the room*

THE 4-WAY PRACTICE

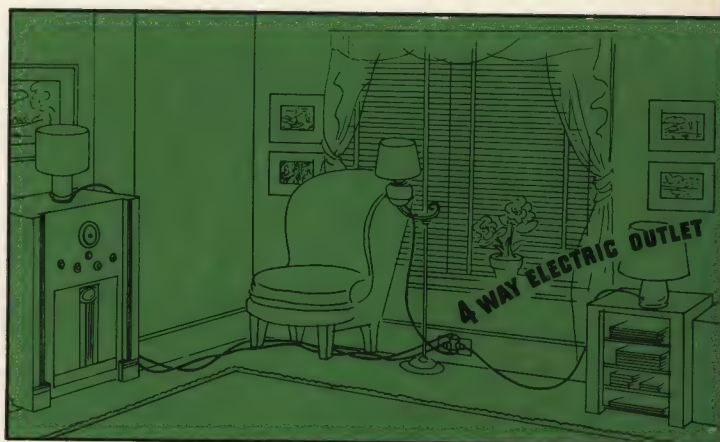
Strange as it may appear, the electric 4-way illustrated is a very common practice and is infinitely more damaging than if our homes were equipped with the pictured 4-way plumbing.

Plumbing of this nature would be bad, inconvenient, sloppy, wet and altogether a nuisance and it is not practiced, but electric 4-way wiring is quite common and extremely dangerous, causing many fires, injuries and life casualties. It is quite a daily life irritation.

The public recognized these inconveniences of electricity, and tried to help themselves by buying many accessories, all of which more or less work, but the problem has always been, "Why shouldn't the householder be able to use current **when, where and if wanted?**" He pays for the wiring between the walls but cannot use it except at predetermined and guessed at locations.

So, the increasing use of devices and patch-word cord really brought a serious hazard of fire and accident, but no way (until recently) has been developed where it is possible to use current **wherever you are, wherever you stand, in any room.**

Now we have what is called the "New Circuit Wiring," meaning that instead of putting electric wiring in (behind) walls, we put it on the surface, as shown in the third illustration, "get-at-able" but not objectionable, practically unnoticeable.





The wall is broken away in this photograph to illustrate how your electrician will connect "Plug-In" Strip to "feeders" which come from your main fuse panel.

"Plug-in" Strip, the "New Method of Circuit Wiring," is installed by merely removing the trim on top of the baseboard, if there is any, slipping the "Plug-in" Strip on top of the baseboard by means of clips that go down behind and hold it, then nail back the trim, and you have wiring all around the room, and can "plug in" wherever you want to. The connecting of that "Plug-in" Strip to some former outlet with wire run down to the panel is an easy electrical job.

"Plug-in" Strip makes it possible to plug in at the baseboard every 6 or 18 inches, all around the room. It frees the householder from restraint in moving his furniture to and fro. It permits him to do as he royally pleases, as far as electricity is concerned.

It is approved by the Underwriters' Laboratories, Inc. for new or old homes—easily installed on any surface—the ideal adequate wiring system—electricity available at your finger tips.

Write for the booklet, "The New Way To Wire A House," or, better yet, ask for information on all of National's many approved wiring systems for the home.

National Electric
PRODUCTS CORPORATION
 Pittsburgh, Pennsylvania



MINERAL WOOL INSULATION

Saves You Money

MONEY TO BURN?

Why burn up money if it isn't necessary? It can be spent for other more-useful things than creating a lot of *waste heat and smoke*. Of course, if one has a high income and a large house, he doesn't need to worry about economy. He can afford to throw money away. But, most people are *not* in that fortunate position. With average incomes, they must budget their expenditures carefully; and those with low incomes,—well, they just have to S-T-R-E-T-C-H their dollars. How?—by careful economy; which means full thick insulation. This saves heat losses and a less expensive heating plant is required.

The use of adequate insulation in all wall and ceiling-roof parts of the structure exposed to weather, is the most important item in the reduction of heat losses. In the usual frame construction, there are open spaces between "studs", "joists" and "rafters". The *outer* exposed sections of the walls and roof will be *cold* in the winter. The *inner* sections, on the other hand, are *warm*,—being affected by the heated air in the rooms. This causes a circulation of the air inside these spaces. The air becomes heated by the inner "warm" section and is cooled by the outside section. This waste of heat can be prevented by *filling* up these spaces *completely*. Full-thick MINERAL-WOOL is ideal for this purpose. It is light in weight, economically and easily applied; also giving other advantages such as greater comfort during hot summer-weather, decreased fire hazard,—and prevention of moisture-condensation in walls.

T. V. A. ENGINEERS PROVE 44.75% HEAT SAVING, WITH MINERAL WOOL

Last winter the T. V. A. engineers conducted winter economy tests. Two absolutely identical houses with the exception of insulation were used. One home had no insulation.

The report gave the following information:

"The heat loss during the period was 5,754,275 B. T. U. for House A and 3,176,769 for House B. Thus, the insulating materials applied to the normally uninsulated Type D house at the Hiwassee Dam construction community, *reduced the total heat loss by 44.75 per cent*. Since the temperatures in House A were slightly lower than those in House B, it seems possible that, with rigid control of temperatures in the two houses, the reduction in heat loss might have been approximately 50 per cent."

The above report reveals that complete wall, floor and roof insulation may cut the fuel bill of a typical small house as much as 44.75 per cent. With care, it adds, this saving may be increased to 50 per cent.

LOW COST HEATING FOR LOW COST HOUSING—WITH MINERAL WOOL

Good insulation is just good common sense. It cuts fuel bills and also permits the use of smaller heating plants and smaller radiators. And it means year round comfort.

In the new Ft. Wayne, Indiana project the rentals are \$2.50 per week per house and the income of no family exceeds \$60.00 per month. These families can't afford to waste fuel dollars.



The flat roofs (see cut) are insulated with 6" of Mineral Wool and the walls with 3½" (full-thick) a good combination.

Tests made during January and February showed that these homes were comfortably heated for 20c a day with fuel oil stoves. The tenants also reported that the homes were very cool during the extremely hot summer weather.

Mr. John Essig, manager, stated, "We are attributing the low cost of heating to the fine insulation in our walls and ceilings. *Our tenants also report the houses to have been very cool during the extremely warm weather.*"

In the April 1939 issue of Architectural Forum it was stated that, "Investigations of heat losses in the small house leads to the conclusion that the only way to save money on heating is to *spend it first.*" This means not only the selection of the heating plant but also careful planning to hold the heat, with *good insulation*, weather-stripping, etc.

WHICH HOMES ARE INSULATED WITH MINERAL WOOL?

Study the photograph at the left. It was taken three days after a snow storm in East Orange, New Jersey. Heat loss from the roofs had caused the snow to melt from the *uninsulated* houses. The owners of the Mineral Wool *insulated* houses enjoyed added comfort and reduced fuel bills while their neighbors were paying to heat "all out of doors."

The cost of insulation was small, yet it paid them as it has so many others in actual dollars of saving. It is said that the dividends from *full-thick* Mineral Wool insulations are ten times that from a Government Bond. It is the only *extra* which you can build into a home which pays for itself.

The Metropolitan Life Insurance Company is using full-thick Mineral Wool in the gigantic Parkchester Apartment project, not only to bring comfort to the 40,000 tenants but also to save money. The company is going to save \$40,000 yearly through good judgment.



MINERAL WOOL is the comprehensive term for ROCK WOOL, SLAG WOOL and GLASS WOOL

Good Insulation IS JUST Good Sense

COSTS SO LITTLE - DOES SO MUCH

Some Questions and Answers

WHY SHOULD I INSULATE MY NEW HOME?

A quick answer would be to *save money*, and to be *comfortable*. In winter an uninsulated home is drafty; expensive to heat; usually has cold bedrooms, for upstairs quarters are difficult to heat; has cold exterior walls which sap body heat; has some rooms too cold in severe weather, necessitating closing off; and has stair well cold air drafts. In summer the uninsulated home is hot, often warmer than outdoors. A well insulated home has more livable space; every room is easier to heat; has warmer bedrooms; more uniform temperatures; and in summer the home is cool and comfortable, often degrees lower than outside. Good insulation is just good sense. You cannot afford to overlook it.

HOW MUCH INSULATION IS ADEQUATE?

The value of mass insulation is directly dependent upon the thickness. One inch of insulation will provide some protection; 2" more, and full-thickness most of all. It might be compared to the clothing which a man wears. In cold weather, a suit of clothes is protection, but a suit of clothes and a thick wool overcoat is adequate protection. There is little economy and no comfort in the small saving between insufficient and adequate insulation.

IS IT COSTLY?

No. Generally speaking, the cost of *full-thickness* insulation is about three per cent of the cost of the home. The difference in cost of *full-thickness* insulation, moreover, is only slightly more than thinner types. Mineral Wool is about 35% cheaper today than in 1936.

WILL FULL-THICK INSULATION SAVE MONEY?

WHAT IS THE VALUE OF WARM EXTERIOR WALLS IN WINTER?

"Next to air temperature," says Professor C. P. Yaglou of the Harvard School of Public Health, "the temperature of exposed walls and glass is of considerable importance. A room heated by the usual convectional methods may be uncomfortably cool at 75 degrees or even at 80 degrees in cold weather, if the insulation of the walls is poor." . . . "Suitable wall insulation in conjunction with convectional heating methods will naturally improve the comfort of a room." If walls are cold, they are uncomfortable to sit near, and actually reduce the usable size of a room by one to two feet.

Professor Yaglou further states: "Years of experience in England have shown that a combination of warm walls and relatively cool air is distinctly more comfortable and pleasant than one of cold walls and warm air. Warm walls reduce drafts. This, from the Public Health standpoint, confirms the findings of the Tennessee Valley Authority.

IS GOOD INSULATION NEEDED IN SUMMER?

Yes. A well-insulated (*full-thickness*) home will be considerably cooler. This is particularly noticeable when old houses have been insulated by pneumatic application and insufferable upstairs bedrooms have been rendered comfortable for sleeping. Insulation of walls, as noted in a previous sentence, is as important in summertime as ceiling insulation.

Numerous tests on identical houses have proved that full-thickness insulation, while economically advantageous in the wintertime, is equally beneficial in the summertime, particularly in the



George Washington's Home at Mt. Vernon, Virginia

WHY WAS GEORGE WASHINGTON'S HOME AT MOUNT VERNON INSULATED?

After a study made by the Commission for the preservation of Historic Mansions, the danger of fire was considered of paramount importance in the preservation of the historic shrine at Mt. Vernon. Mineral Wool has been pneumatically installed between the rafters and the walls around dormers to inhibit the spread of any fire which might attack the roof area by reason of lightning or burning brands from any external sources. This use was approved by the National Bureau of Standards on the basis of a series of tests.

As an interesting historical note, some Mineral Wool is today being made from the slag of the very same ore from which George Washington's cannons were molded.

IS ATTIC VENTILATION NEEDED?

Yes. Louvers (slots for the flow of air) are recommended building practice, with or without insulation. They form a desirable safety valve for the natural elimination of moisture vapor, and should always be installed above insulation. They also provide for ventilation to eliminate the excessive summer heat in attics. Louvers should have a minimum free opening of 12½ sq. in. per 100 sq. ft. of ceiling area.

WHAT SHOULD I KNOW ABOUT HUMIDITY IN THE HOME?

A few years ago, high humidities were generally advocated. Present-day authority, however, as expressed by Professor C. P. Yaglou of the Harvard School of Public Health, states:

"The humidity factor, although very important in warm

incubation upon the flames. Fuel (coal, gas or oil) are materially reduced. In a recent United States Government Test on identical houses, insulation saved 44.75% of the fuel. The dollar saving could be much greater in a colder climate.

IS INSULATION A YEAR-ROUND BENEFIT?

Yes — Summer and Winter, Spring and Fall.

WHAT KINDS OF INSULATION SHOULD I CONSIDER?

All kinds. You want the greatest dollar value. Consult your builder or architect. Ask him to tell you about controlling the flow of heat in the home.

No insulation is expensive in first cost. Some are expensive later. Some insulations do a better job than others, and in consequence effect greater fuel savings, give greater comfort, etc. It is true that you can obtain a thinner thickness of competitive insulations but their value will be in proportion to their thickness. Some have a value for decorative purposes, but the true measure of value is in the heat savings and summer comfort, obtained only by thickness.

WHAT CAN YOU TELL ME ABOUT MINERAL WOOL?

Mineral Wool is the comprehensive name for ROCK WOOL, SLAG WOOL and GLASS WOOL. It has been used for 100 years for high temperature industrial insulation, and also to make homes comfortable. It may be installed in new homes in the form of strips or batts, 1", 2" and 3 1/2" thick. The latter is designated as "full-thick", for it completely fills the hollow spaces in the exterior walls. This is also accomplished by pneumatic application of mineral wool in granular form. Full-thick is decidedly preferable, yet the cost is only slightly more. Mineral wool insulation forms a barrier to the flow of cold and hot air. It is fireproof and termite proof, for it is produced from minerals. No greater dollar for dollar insulation material has yet been found. Full-thick mineral wool insulation (3 1/2") is equivalent to eight feet of solid stone, in insulating value.

SHOULD I INSULATE BOTH WALLS AND ROOF?

Yes. The benefits are year-round. Calculations made on a group of typical suburban houses showed the following figures:

Winter Heat Losses	
Side Walls	60%
Roof	40%
Heat Gain in Summer	
Through Side Walls	33 1/3%
Through the Roof	66 2/3%

While these calculations will vary slightly, depending upon the relationship of the amount of area in side walls and roof of each house, they are typical, and explain why both walls and roof should be insulated. In addition, heat may be lost or gained through the glass in the windows, thin and loosely fitting doors, and general leakage of air. See "Plan Your House To Suit Yourself" (Charles Scribner's Sons).

MINERAL WOOL A POPULAR INSULATION?

Yes. Of all heat stroke deaths, 67.1% took place in the home, only 24% in factories, and only 10.9% in public places, according to the U. S. Department of Commerce. This astonishing fact is undoubtedly accounted for because the home shelters two groups of human beings most susceptible to heat stroke — infants under one year, and persons over sixty.

Uninsulated homes are frequently hotter than outdoors, and sometimes are dangerous storehouses of accumulated heat. Many homes are now being built with ceilings eight feet or less — a sure heat trap unless adequately insulated.

IS MINERAL WOOL A POPULAR INSULATION?

Mineral Wool has been used for exactly one hundred years for insulation purposes. Some of the first railroad cars used it — the crack 20th Century Limited has it today. The Scientific American saw the great value of it in 1887 and accurately predicted the future. President Grover Cleveland's home was insulated with it. In 1937 the largest apartment project in the world adopted mineral wool as an insulation for the exterior brick walls, establishing a new use based upon calculated engineering economy. A saving of \$40,000 a year is estimated. Enough mineral wool is used annually to insulate every home in Atlanta, Seattle, Kansas City, or Buffalo.

IS MINERAL WOOL EXPENSIVE?

Decidedly not — the contrary is true. Not only is the first cost low — about 3% of the building cost — but the resultant savings in fuel bills of 30 to 40% with full-thick installation, mean that it will pay more dollars yearly in dividends than any thinner insulation. It will actually pay for itself. In addition, there is comfort, throughout the year. A smaller heating plant and smaller radiators can be installed.

IS MINERAL WOOL A FIRE PROTECTION?

Lives and property are safeguarded. Numerous records of the stoppage of fires in homes with Mineral Wool-filled partitions, roofs, and walls, are available.

Recent tests at the National Bureau of Standards show that a wood lath partition filled with Mineral Wool will stop the passage of fire for one hour. After this long period of time, the studs were still able to carry their load.

WILL FULL-THICK MINERAL WOOL INSULATION BE AN ADVANTAGE IF I AIR CONDITION MY HOME LATER ON?

Positively. It will be a real advantage, for the operating costs of the air conditioning apparatus will be less. Your architect or builder will be glad to advise you on this. The cost of cooling is eight times greater than heating and initial savings on equipment is usually more than enough to pay for full-thick insulation. A home cannot be economically summer air conditioned without adequate insulation.

The insulation of buildings during the winter has been found to produce little effect in comfort, and from the standpoint of health, the evidence is overwhelmingly on the negative side."

"Even in buildings constructed of waterproof materials, relative humidities above 40% are troublesome in cold weather. While moisture vapor barriers will check condensation, there is a possibility of overhumidification due to carelessness of the occupant and he should guard against running humidities higher than the following table, recommended by the National Paint, Varnish and Lacquer Association.

Outside Temperature		Inside Relative Humidity	
Below 0	Not more than 20%	Below 0	Not more than 20%
0 and 20 above	Not more than 30%	0 and 20 above	Not more than 30%
20 above and over	Not more than 40%	20 above and over	Not more than 40%

Condensation is best illustrated by the collection of moisture on the outside of a cold glass of water in a hot, humid room. Moisture vapor occurs in most rooms and frequently occurs on single window glass in cold weather. When it appears, it is a signal that too much moisture vapor is being generated in the house through overhumidification by uncontrolled mechanical means, or the escape of too much moisture from laundry, bathrooms, or cooking. It can easily be controlled and eliminated by slightly opening windows, or, better yet, ventilating fans in the rooms where the moisture is generated. Hundreds of thousands of successful jobs of Mineral Wool and other types of insulation materials have been installed without moisture vapor barriers, and no moisture problems have been encountered. However, the modern types of Mineral Wool for new construction purposes, are sold with a vapor barrier attached, in the form of a moistureproof paper which is applied to the inside of studs or the underside of rafters, nearest the warm side, thus effectively checking the escape of moisture into the hollow spaces. It is included as today's solution to the humidity question. This is protection against condensation. Such moisture vapor barriers are desirable for all types of insulation.

WHERE CAN I GET UNBIASED ADVICE ABOUT INSULATION?

If you have any doubt at all about the advisability of full-thick insulation, about mineral wool, about costs, or about any of the above statements, by all means consult your architect or builder. Ask him the all important question, "which material and what thickness will save the greatest number of fuel dollars?"

Now — when you are building — is the time to insure comfort, protection and economy. You cannot afford to slight or overlook an item which means so much to you and to your family. True, insulation may be added to already-constructed homes, but it is less expensive to include in the original financing.

IF MINERAL WOOL IS SO GOOD, WHY IS IT NOT ALWAYS USED?

Most homes are built to a price and insulation, being invisible, is sometimes slighted. Few homes are built today without some kind of insulation, but the wise economy, which quickly proves itself is full-thick Mineral Wool.

For Complete Home Insulation use full-thick MINERAL WOOL — It Pays

How to Figure Savings

WITH FULL-THICK MINERAL WOOL INSULATION

Full-thick Mineral Wool saves in many ways. For instance, less heat is required to make the home comfortable in winter and so there is a saving on fuel cost. A smaller heating plant and smaller radiators may be installed. In summer the home is much more livable—a plus value.

A typical calculation of the fuel savings in heating a small, well insulated (full-thick) house shows that the savings are greater than the additional interest and amortization on the slight extra cost of the insulation.

As an example take a house of \$3,000 value with an F. H. A. mortgage of 90%, or \$2700. The cost of interest, amortization, taxes and insurance on a 25 year basis would be approximately \$20.00 a month.

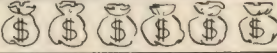
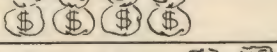
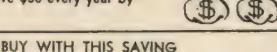
Adding a very liberal figure of \$90.00 for full-thick insulation (3% of \$3,000) in all exterior walls and the upper ceilings, the property would then cost \$3,090.00. The monthly carrying charges would be \$20.49.

Heating figures are estimated for hand-fired coal in the temperate zone of Philadelphia, Cincinnati and St. Louis. The saving would be more, of course, in colder regions and with more expensive fuels. No account is taken in these figures for the possible lower first cost of the heating plant.

	Uninsulated	Insulated
Total cost of construction and land	\$3,000.00	\$3,090.00
90% mortgage (approx. monthly rate)	20.00	20.49
Estimated monthly coal cost (other fuels would show greater savings)...	5.00	3.33
Total monthly outlay.....	25.00	23.82
Saving during life of mortgage		354.00

The saving during the 25 year F. H. A. Mortgage would be \$354.00—or nearly four times the original cost of the full-thick Mineral Wool. It is evident that it not only pays for itself in actual fuel savings, but in addition there is the winter and summer comfort, and the reduced fire hazard.

HERE'S WHAT INSULATION SAVINGS WILL BUY

	This UNINSULATED house costs \$150 to heat every year.	
	This house, INSULATED with 4" of mineral wool, costs only \$100 to heat every year.	
	So this average family may save \$50 every year by insulating their home.	

AND HERE'S WHAT THEY CAN BUY WITH THIS SAVING

SHOES It will buy shoes for the entire family for a year—ten pairs.		CLOTHING It will buy 2 men's suits, 8 women's dresses, 4 boy's suits or 10 girl's dresses.	
MEAT It will buy Sunday's roast every Sunday for a year.		VEGETABLES It will buy 2 vegetables a day every day for a year.	
ENTERTAINMENT It will take the whole family to the movies once a week for a year.		TRAVEL It will buy gasoline for 50 motor trips in the country.	

MINERAL WOOL HAS BEEN SAVING MONEY FOR OVER ONE HUNDRED YEARS

In selecting Mineral Wool for your new house you are obtaining an insulation which has been in use for many years.

First, it was used for boilers and steam pipes in the early days of the steam engine. Later it was produced in Germany as a tinsel for Christmas trees. Now, not only building construction but also stratosphere airplanes, cold storage, gas stoves, refrigerators and scores of other uses make it one of the most valuable synthetic materials produced by man.

Yet Mineral Wool, which is a comprehensive term for Rock Wool, Slag Wool and Glass Wool, is produced and sold so cheaply that no house need be without it. The comfort and protection of it are available to rich and poor alike. The few minutes spent reading these four pages can save you hundreds of dollars. Ask your builder about it or write to us. Investigate. It will pay you.

Architects, engineers, and builders who have so generously adopted Mineral Wool for its major volume use in home insulation have done so with the assurance that they are applying the same material that the pioneers have been using in the advancement of engineering and science for the last ten decades.

Yet . . . only within recent years has mineral wool become universally used in small and large homes—new and old. Within the last 13 years, general recognition of the many qualities took place and great strides in production and application were made. The result has been greater comfort and economy and greater protection for the home.

FIRE HAZARD REDUCED

The U. S. Bureau of Standards last year declared that Mineral Wool introduced into the stud spaces of walls and roof will reduce the fire hazard of plaster or wall board finishes by twenty to thirty minutes.

Quoting from their Technical News Bulletin of November 1938:

"The filling increased the fire resistance of the construction with the ½ inch gypsum board facing by 10 to 20 min. for that of gypsum plaster on wood lath by 25 to 30 min. and for those of gypsum plaster on metal lath by about 30 min."

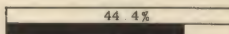
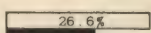
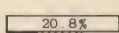
Fire can travel fast through hollow walls. There are also many examples on record of roof fires which were stopped at the insulated ceiling line.

REMEMBER—IN WINTER—AN OVERCOAT IS AS NECESSARY AS A HAT

In winter a suit of clothes and a hat can be some protection from the elements . . . but a thick wool overcoat can be adequate protection. So it is with a house. Walls and roof with thin insulation or none at all will be some protection but the economy, comfort and protection of full-thick Mineral Wool will be well worth the difference. You cannot afford to overlook it. Even low income families need full-thick protection.

WAYS IN WHICH HEAT IS LOST FROM THE AVERAGE HOUSE AND HOW IT CAN BE SAVED

KEY:  Heat loss when uninsulated.  Heat saving with insulation

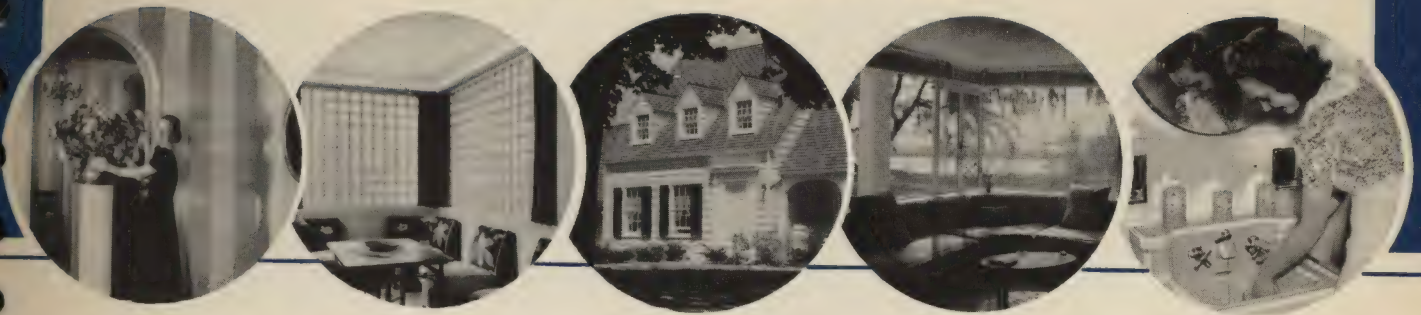
- Walls and Roof**

 44.4%
 3½ inches of mineral wool stops 75% of this loss.
- Window glass and Doors**

 26.6%
 Storm sash and storm doors stop 60% of this loss.
- House Crack**

 20.8%
 Weatherstripping saves 30% to 70% of this loss, depending on the tightness of the window.
- Floors**

 8.8%
 3½ inches of mineral wool saves 75% of this loss.

NOTE: Uninsulated heat losses are based on a survey of 450 typical houses by the American Gas Association.

PITTSBURGH GLASS PRODUCTS

MAKE HOMES MORE BEAUTIFUL
MORE USEFUL . . . MORE LIVABLE



PITTSBURGH PLATE GLASS COMPANY PITTSBURGH CORNING CORPORATION

GRANT BLDG.

PITTSBURGH, PA.

The Pittsburgh Plate Glass Company and the Pittsburgh Corning Corporation offer the residential builder glass products of outstanding quality for use in the creation of attractive, useful and livable homes.

For more than half a century, Pittsburgh Glass Products have been leaders in their fields. The manufacturers have generously expended resources to improve old glass products and develop new ones. As a result, the builder of today has better glass to work with, and a far wider variety of glass products to assist him in erecting better homes than ever before.

The following pages describe and illustrate some of these Pittsburgh Glass Products. Pittsburgh Polished Plate Glass for the home

. . . brilliantly beautiful, affording perfect vision. Pittsburgh Mirrors . . . plain, and in colors, to add charm to the home. Carrara Structural Glass . . . the modern medium so popular for wall covering, table tops and similar uses. Pennvernion Window Glass . . . a quality sheet glass that has won a national reputation. And PC Glass Blocks . . . the newest member of the Pittsburgh Glass family, and a material of endless possibilities in home construction and decoration. If, after examining the succeeding pages, you desire further information about any or all of the Pittsburgh Products mentioned, write Pittsburgh Plate Glass Company, Grant Bldg., Pittsburgh, Pa.

USES OF PITTSBURGH GLASS IN THE HOME

It is possible to illustrate in the following pages only a few of the ways in which these Pittsburgh Products can be used by the builder in the modern home. We give below a more complete list, which may contain suggestions you will find valuable in building, remodeling or decorating.

POLISHED PLATE GLASS

Windows
Picture Windows
Skylight
Corner Shelves
Book Shelves
China Closet Shelves
Bathroom Shelves
Window Shelves
Kitchen Shelves
Reception Hall Shelves
Powder Room Shelves
Whatnot Shelves
Decorative Shelves
Decorative Screens
Aquariums
Table Tops
Bar Tops
Shower Doors
Shower Enclosures
Lighting Fixtures
Built-in Wall Cases
Sill Covers
Semi-Partition Covers
Valances
Sunporches
Solariums

Conservatories
Greenhouses
Window Ventilators
Wind Screens on Porch
Balustrades
Push Plates

MIRRORS

Table Tops
Bar Tops
Niche Linings
Back Bars
Sill Covers
Semi-Partition Covers
Valances
China Closet Shelves
Bathroom Shelves
Corner Shelves
Window Shelves
Reception Hall Shelves
Kitchen Shelves
Decorative Shelves
Decorative Screens
Aquariums
Lighting Fixtures
Fireplace Facing
Dressing Room Walls
Powder Room Walls
Over Bathtub

Reception Hall
Over Mantel
Full-length Door
Mirrors
Plates for Electrical
Outlets
Push Plates for Light
Switches
Structural Mirrors
Throughout the House

CARRARA STRUCTURAL GLASS

Table Tops
Mantel Tops
Bar Tops
Sill Covers
Semi-Partition Covers
Bathroom Shelves
Corner Shelves
Book Shelves
Decorative Shelves
Window Shelves
Reception Hall Shelves
Kitchen Shelves
Radiator Covers
Niche Linings
Kitchen Splashboards
Fireplace Borders
Fireplace Facing
Bathroom Walls
Kitchen Walls
Powder Room Walls

Dressing Room Walls
Flower Boxes
Balustrades
Push Plates
Ceilings

PC GLASS BLOCKS

Around Front Door
Exterior Stairwell Walls
Exterior Openings
Combined with Sash
Basement Area Ways
Basement Game Rooms
Exterior Screen Walls
Exterior Wind Breaks
Garden Walls
Porch Enclosures
Basement Partitions
Partitions between
Living and Dining
Rooms
Partitions between
Kitchens and Dinettes
Partitions between
Libraries and Living
Rooms
Screen Partitions for
Bathrooms
Shower Enclosures
Dressing Room Screen
Partitions
Decorative Fireplaces
Bars
Back Bars
Nursery Walls

Hall and Foyer Walls
Shower Lining
Shower Stiles and
Partitions
Interior Balustrades
Entrance Vestibules
Decorative Panels
Indirect Lighting
Semi-Partitions
Bath Tub Enclosures
Exterior Walls over
Kitchen Work Surfaces
Window Seat Bases
Closet Windows
Above Bath Tubs
Bathroom Ceilings
Hall Ceilings
Foyer Ceilings
Kitchen Ceilings
Flanking Bathroom
Mirrors
Study Walls
Breakfast Room Walls

PENNVERNON WINDOW GLASS

Windows
French Doors
Decorative Shelves
Corner Windows
Sun Porches
Solariums
Conservatories
Greenhouses
Skylights



VISTA PLATE GLASS

Thin Plate Glass for General Glazing Purposes

Vista Plate Glass was developed to meet a definite need in the building industry . . . the need for a fine plate glass which could be used for general glazing, but which would be low enough in cost to warrant wide use, and which could be glazed in standard sash with standard sash weights.

Has Advantages of Heavier Plate Glass

Vista Plate Glass meets these requirements. It has all the visual advantages of heavier plate glass. High polish on both surfaces, with the accompanying intrinsic beauty of brilliant luster and reflection. Absolute freedom from distorting defects, with consequent ability to transmit with perfect clarity all objects seen through it. And sufficient strength and durability to assure permanence when it is used in residences or other buildings.

Increases Resale Value of Houses

The building glazed with Vista Plate has a greater resale value which more than offsets the slight extra cost of Vista Plate over ordinary window glass. Vista Plate is glazed in standard 1 3/8 in. sash with ordinary sash weights.

Physical Characteristics

QUALITIES	THICK- NESSES	MAX. SIZES	WEIGHTS
Silvering Mirror Glazing Glazing	5/64" to 9/64"	72x123 (Sizes over 7 sq. ft. not recommended for exterior glazing)	1.75 lbs. [[]]
STRENGTH		COLORS	FINISH
In direct propor- tion to the square of the thickness		Clear	Ground and Polished



BLUE AND FLESH TINTED PLATE GLASS

For Striking Decorative Effects

Flesh Tinted Plate Glass

Flesh Tinted Plate Glass is a medium becoming increasingly popular with builders to assist in obtaining decorative effects. This glass approximates in color the shading commonly found in the skin of a Caucasian person. The color is slight in surface section, considerably stronger in transverse section. Used in mirrors, Flesh Tinted Plate Glass produces reflections which minimize blues and violets and emphasize flesh colors, thus offering flattering images.

Blue Plate Glass

Blue Plate Glass, another popular product of the PITTSBURGH PLATE GLASS COMPANY, is a glass of rich blue color, ideal for decorative use in modern building. Like Flesh Tinted Plate Glass, this Blue Plate Glass is extraordinarily attractive when fabricated into mirrors.

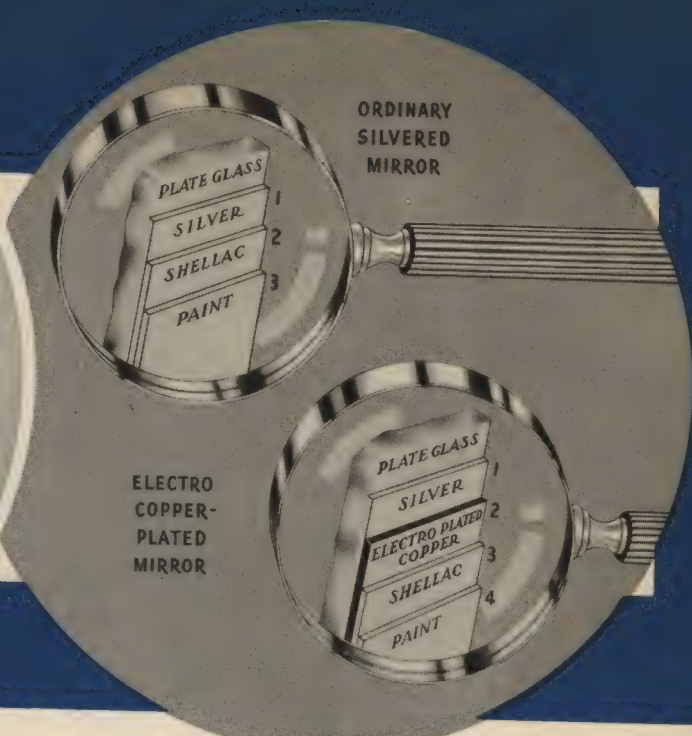
Specific Uses

Flesh Tinted Mirrors or Blue Mirrors can be used with great success in home decoration to add color, warmth and sparkle to all types of rooms. They also are exceedingly ornamental in bars, stores, and public and commercial buildings of all sorts. Both types of Plate Glass also serve very well as unusual table tops, desk tops, book shelves, sill covers, etc.

Physical Characteristics

QUALITIES	THICK- NESSES	MAX. SIZES	WEIGHTS
Selected only	13/64"	123x216	2.67 lbs. [[]]
STRENGTH		COLORS	FINISH
Tension 6500 lbs. [[]] Comp. 36,000 lbs. [[]] Modulus Elasticity 10,000,000		Blue and Flesh	Ground and Polished





PITTSBURGH MIRRORS

For Every Structural and Decorative Purpose

Pittsburgh Mirrors include mirrors for every building need. Whether used structurally in a building, or as purely decorative media, Pittsburgh Mirrors are consistently of high quality and afford superior reflectivity.

Colors and Types Available

In line with the recent trend toward the wider use of mirrors, both structural and framed, and the increasingly important part played by mirrors in design and decoration, the Pittsburgh Plate Glass Company has developed a wider selection of glass colors and mirror backings than ever before. Consequently, the architect and designer can today create new and interesting effects with mirrors.

All Pittsburgh Mirrors are available made from regular polished plate glass. But for the achievement of striking and unusual effects, Pittsburgh Mirrors may also be obtained made from blue, flesh tinted, water white (Crystalex) or green (Solex) plate glass. Furthermore, these various colors of glass may be treated to additional tone mutations by the backing used in fabricating them into mirrors. The regular silver backing is, of course, available, and in addition, a beautiful gold backing, and a smart gunmetal backing.

PITTSBURGH COPPER BACK MIRRORS

Pittsburgh Copper Back Mirrors receive, during manufacture, a coating of copper, electroplated over a heavy film of silver . . . and this copper backing forms an efficient protection against the usual effects of varying climatic and atmospheric conditions. Since

these specially protected mirrors retain their beauty and usefulness year after year, their use practically eliminates the need for replacements.

Pittsburgh Copper Back Structural Mirrors

These mirrors are specially fabricated for use with mastic, in order to give maximum service. Structural mirrors differ from other types in that they have an additional protective coating.



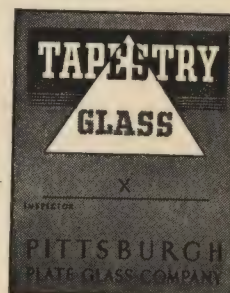
TAPESTRY GLASS

A Translucent, Semi-Opaque Glass

Tapestry Glass is a product ideally suited for use where the builder desires to glaze in such a way as to admit the light but obstruct the view. Objects placed quite close to the surface of the glass can be seen through it almost as plainly as through transparent glass. But objects decrease in visibility and eventually become entirely shadowed and obscured when they are removed from close proximity to the glass.

Finish

It is furnished with both surfaces in Tapestry finish or one in Tapestry finish and the other polished, and it can be decorated by sand-blasting, chipping or mitering.



Physical Characteristics

QUALITIES	THICK-NESSSES	MAX. SIZES	WEIGHTS
Silvering Mirror Glazing Glazing	Fabricated from any thickness of glass	Regular . . . up to maximum glass size Copper Back and Structural. 70x144	Approximately same as plate glass
STRENGTH		COLORS	FINISH
Approximately same as plate glass		Plain, Blue, Flesh, Water White, Blue-Green	Silver, gold or gunmetal backing on any color glass

Physical Characteristics

QUALITIES	THICK-NESSSES	MAX. SIZES	WEIGHTS
Glazing	7/32"	60x144	2.89 lbs. [I]
STRENGTH		COLORS	FINISH
Equal to or greater than that of regular plate glass		Translucent Semi-Opaque	Plain 7/32" Polished 7/32"



CARRARA STRUCTURAL GLASS

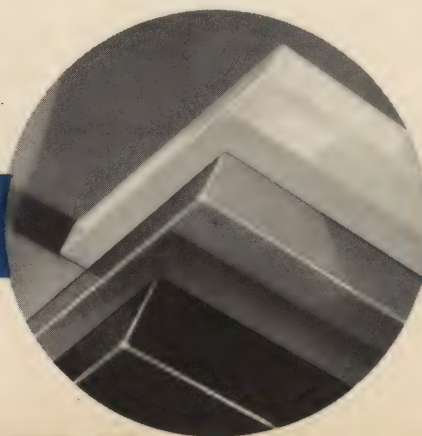
**Beautiful, Practical and Versatile Material
for Use in the Home**

THE PRODUCT

Carrara Structural Glass is a material which successfully combines beauty, versatility, sanitation, permanence and reasonable cost. It is a glass whose surface is mechanically ground and polished. During manufacture, grinding wheels remove the crude, or fire finish, leaving a homogeneous, uniform structure. The surface thus exposed is then polished, by essentially the same methods as those employed in the manufacture of the finest polished plate glass. This grinding and polishing results in a smooth, mirror-like surface, accurately reflective.

Carrara brings to the builder soft color tones that are mellow, distinctive and designed to harmonize with any color scheme. Carrara is strong and durable, made to withstand

rigorous use. It will not absorb odors of any kind. It is impervious to grease, grime, moisture, chemicals, and pencil marks. It can be easily cleaned by an occasional wiping with a damp cloth. It retains its brilliant luster and perfect mirror-like reflective qualities year after year. It is easy to install. And it is adaptable to so many different kinds of treatment that it offers the builder unlimited opportunities for design. Walls of Carrara give a bathroom or a kitchen a personality all its own. Such walls are distinctive in their beauty. They are polished, rich and reflective as a mirror. They retain their original loveliness year after year, always looking new and fresh.





STRUCTURE

Uniform, homogeneous, closeknit, vitrified.

DECORATION

Carrara can be beautifully decorated to suit individual tastes. It can be shaded or fluted. It can be sand-blasted with any design desired, bringing the pattern out either in shallow or deep relief. These designs may be further enriched by the application of gold, silver or colors.

VARIED USES IN THE HOME

Carrara lends itself to a variety of uses in the home. Although most widely used for bathroom and kitchen walls, Carrara serves equally well for decorative, practical sill covers, being easy to clean with a damp cloth and absolutely impervious to moisture. Such Carrara sills can be of a shade to match the decor of the room. Carrara is also a splendid material for such uses as niche lining, shelves, door and window trim, radiator covers, kitchen splash boards and many others.

INSTALLATION

Carrara is easy to install. It is handled similarly to marble. To insure installations being made according to our standards, we maintain our own crews of workmen.

Carrara may be installed over any hard, firm wall surface, but an allowance should be made for a space of $\frac{3}{8}$ in. behind the glass for setting.

Carrara is installed by means of a plastic cement, which bonds permanently with the glass and the wall—yet allows for settling, shrinkage and expansion.

COLORS

Carrara Structural Glass is available in ten attractive colors. The seven standard colors are: Black, White, Jade, Grey, Ivory, Forest Green and Beige. The three trim colors are: Wine, Orange and Rembrandt Blue.

THICKNESSES

Black, White, Jade, Grey, Ivory—

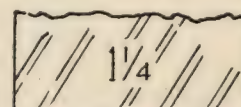
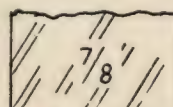
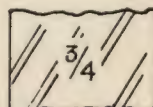
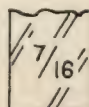
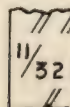
$\frac{11}{32}$ ", $\frac{7}{16}$ ", $\frac{3}{4}$ ", $\frac{7}{8}$ ", $1\frac{1}{4}$ "

Black is also available in $\frac{1}{4}$ "

Forest Green and Beige..... $\frac{11}{32}$ " only

Wine, Orange and Rembrandt Blue..... $\frac{7}{16}$ " only

ACTUAL THICKNESSES





PENNVERNON WINDOW GLASS

A Quality Sheet Glass for General Glazing Purposes

Pennvernon Window Glass represents an extraordinarily high development in sheet glass making. This glass is manufactured by a special process, in which it is drawn vertically and held absolutely flat from molten metal to finished sheet. During the drawing process, no rolls or foreign substances of any kind touch the surface of the glass until it has cooled sufficiently to be beyond injury. Consequently, Pennvernon has an unusually brilliant, reflective and unmarred surface finish on both sides of the sheet.

Advantages

Other superior qualities distinguish this fine window glass, too. Because it is made only from the purest and most carefully selected ingredients, it is remarkably transparent and retains its clarity indefinitely.

Pennvernon's durability also recommends it. Because the texture of its surfaces is so smooth, wear and abrasion affect it less than ordinary window glass, and its beauty and utility last longer.

Because of these qualities, builders everywhere find Pennvernon Window Glass the most satisfactory sheet glass to use.

Qualities

Pennvernon is graded at the factory by experts, in accordance with U. S. Government standards, and a label indicating quality is affixed to each light, as follows:

AA—This is the best quality of window glass obtainable. Be-

cause Pennvernon "AA" is higher in quality than is commercially necessary, it is made only on special order and priced accordingly.

A—The highest grade of window glass for commercial uses. Contains no imperfections that can perceptibly interfere with straight vision.

B—Window Glass free from noticeable defects, but containing imperfections which prohibit its being graded as "A" quality.

Greenhouse—A special quality selected to eliminate defects injurious to growing plants. Available in sizes 16x18 in., 16x24 in. and 18x20 in. only.

Heavy Sheet Glass—Available in thicknesses of $\frac{1}{8}$ in. and $\frac{3}{8}$ in. and in AA, A, and B qualities. It is generally specified where weight and strength are required.

Picture Glass—Pennvernon Picture Glass, about 16 oz. in thickness, is a thin glass especially made and graded for picture framing.

Packing

Pennvernon Window Glass is packed with a sheet of special type separator paper between each light to prevent scratching, marring or staining. Lights are then placed in a specially constructed corrugated carton, which is safe and convenient to handle. This carton is inserted for shipment in a sturdy, light-weight wood crate, upon which the Pennvernon trade-mark always appears for easy identification.

Physical Characteristics

QUALITIES	THICKNESSES	MAX. SIZES	WEIGHTS	STRENGTH	COLORS	FINISH
AA-A-B	Single Strength	Heavy Sheet	Picture 16 oz. []	Same as plate glass of equal thickness	Clear	Fire-finished
Greenhouse	.087 - .095	$\frac{3}{16}$ " up to 50 []	S.S. 19 oz. []			
Picture	Double Strength	$\frac{1}{32}$ " up to 60 []	D.S. 26 oz. []			
Heavy Sheet	.118 - .133		$\frac{3}{16}$ " 40 oz. []			
	Heavy Sheet		$\frac{1}{32}$ " 45 oz. []			
	$\frac{3}{16}$ " - .187 to .200					
	$\frac{1}{32}$ " - .212 to .225					

PC GLASS BLOCKS

made by Pittsburgh Corning Corporation—which combines the facilities and research of the world's foremost manufacturer of technical glass and its greatest producer and distributor of flat glass products.

RESEARCH FACILITIES

For several years groups of men in the factories and the laboratories of the Pittsburgh Corning Corporation, the Corning Glass Works and the Pittsburgh Plate Glass Company have been painstakingly studying all aspects of glass block design, fabrication and performance. Where it has seemed necessary or desirable the assistance of independent investigators and testing laboratories has been utilized. Among these have been the following:

The Mellon Institute of Industrial Research
The Carnegie Institute of Technology
The University of Minnesota
Pittsburgh Testing Laboratories
Electrical Testing Laboratories
Riverbank Laboratories

SERVICE TO THE TRADE

The Pittsburgh Corning Corporation maintains an able staff of field consultants and glass experts. Builders everywhere are invited to take full advantage of the cooperation and advice these men can extend in connection with problems involving these products. Complete engineering and specification service is provided on all Pittsburgh Corning Products. Communications addressed to Pittsburgh Corning Corp., Grant Bldg., Pittsburgh, Pa., or to any branch of the Pittsburgh Plate Glass Co. will receive prompt attention.

DISTRIBUTION FACILITIES

PC Glass Blocks are distributed through the warehouses of the Pittsburgh Plate Glass Company, the branches of W. P. Fuller & Co. on the Pacific Coast, and through selected dealers. Pittsburgh warehouses are located in the principal trading centers throughout the country, and form a complete network of fully-stocked headquarters, with unequalled facilities for rendering prompt and efficient service to the building trades, no matter where located.

THESE IMPORTANT PC GLASS BLOCK FEATURES

... mean easier installation, stronger panels and greater beauty

1. PC Glass Blocks are made of clear, colorless glass of proven durability. The light which streams through them is of full daylight tone, requiring no special consideration in the matching of colors, either for decoration or production uniformity.

2. PC Glass Blocks are hollow "all glass" units with fused seals made at high temperatures, relatively free of entrapped water vapor. This feature was developed by our engineers so that PC Glass Blocks will remain tightly sealed. Because of this patented method of "all glass" construction, the seal has the same coefficient of expansion as the block itself. The joint is as strong as any other part of the block. This tight seal insures a dry, dead air space within the block, which is so important to efficient heat insulation. No other glass block embodies this important feature.

3. PC Glass Blocks have all-glass mortar

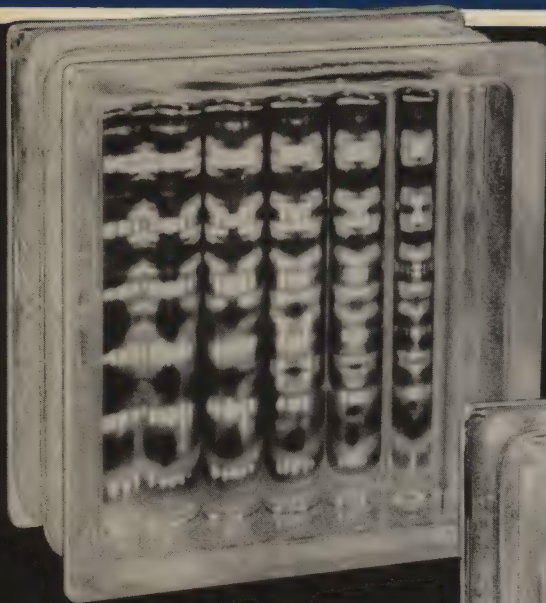
edges coated with grit-bearing water- and alkaline-resistant plastic coating. This forms a permanent bond between glass and mortar, which insures a high degree of wind resistance and weather-tightness. As is the case with all masonry, voids in mortar joints are a chief cause of leaky walls. The mason can prevent this trouble by using care in completely filling all mortar joints.

4. PC Glass Block edge construction forms a "key-lock" mortar joint, providing a full bed of mortar, yet permitting a visible joint of only $\frac{1}{4}$ inch,

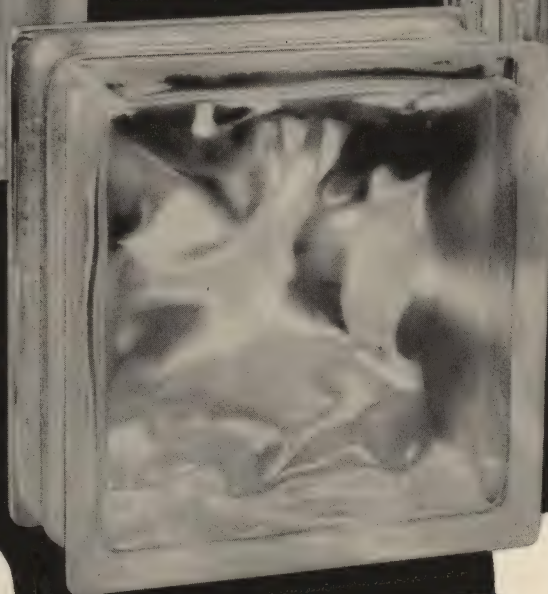


resulting in a trim panel that is pleasing to the eye. And this "key-lock" joint is easier to handle in laying.

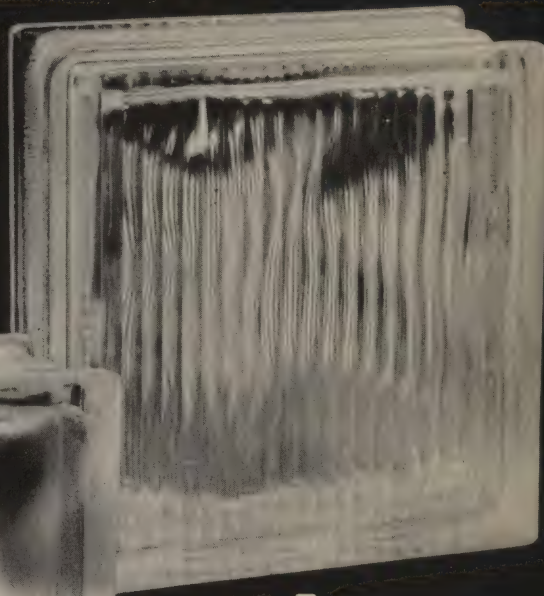
These are all features that assure consumer satisfaction. Better color—neater appearance in panels—greater durability—all are important. All of them guard the investment of the final consumer—and the reputation of those who have recommended and installed the material.



A



B



C

A. ARGUS

1. A conventional pattern designed for general use, both decorative and utilitarian.
2. High light transmission with good light diffusion.
3. Can be laid with flutes vertical or horizontal on room side with equally pleasing and efficient results.
4. Smooth outside faces permit maximum cleanability.
5. Pattern description: Smooth outside faces, interior flutes identical and assembled at right angles.

NOTE: This block can be supplied with smooth outside faces and interior parallel flutes on special order. This variation is not carried in stock.

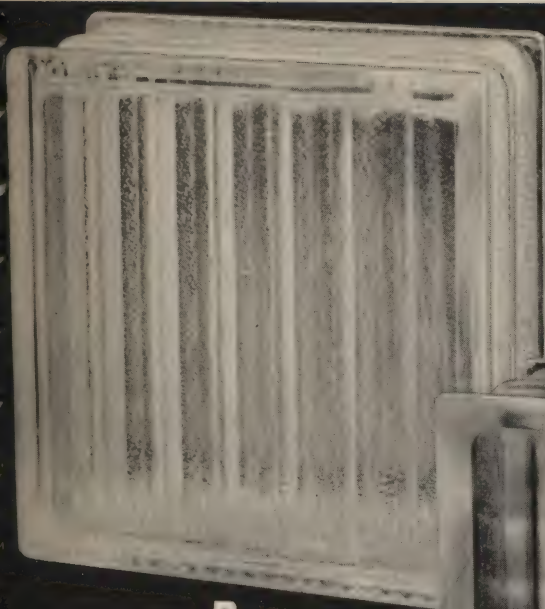
B. DECORA

1. A decorative pattern ideally suited to harmonize with both modern and conventional design.
2. High light transmission with irregular diffusion and high translucency.
3. Asymmetric design permits laying without regard to pattern.
4. Smooth outside faces insure maximum cleanability.
5. Pattern description: Smooth outside faces, asymmetric design on both interior faces.

C. REEDED DECORA

1. A modified Decora design to increase irregular pattern effects.
2. High light transmission with good diffusion and superior obscurity.
3. Should be laid with exterior flutes vertical.
4. Cleanability is maintained by the smoothly rounded exterior flutes.
5. Pattern description: Narrow convex parallel flutes on both exterior faces, asymmetric design on both interior faces.

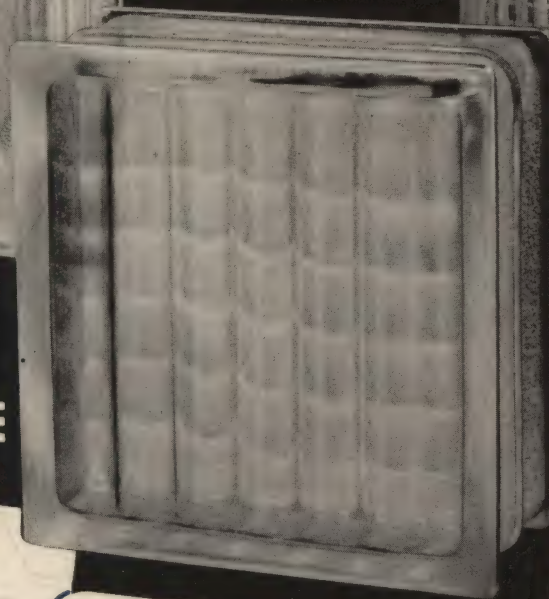
AVAILABLE IN A WIDE SELECTION OF SIZES AND PATTERNS



D

D. SAXON

1. A pleasing uniform pattern designed for even light diffusion and brightness reduction, but with good light transmission.
2. Interior etched surfaces with exterior flutes produce maximum obscurity.
3. Should be laid with exterior flutes vertical.
4. Cleanability is maintained by the smoothly rounded exterior flutes.
5. Pattern description: Narrow convex flutes on both exterior faces, parallel to wide flutes on both interior faces. Both interior faces are etched.

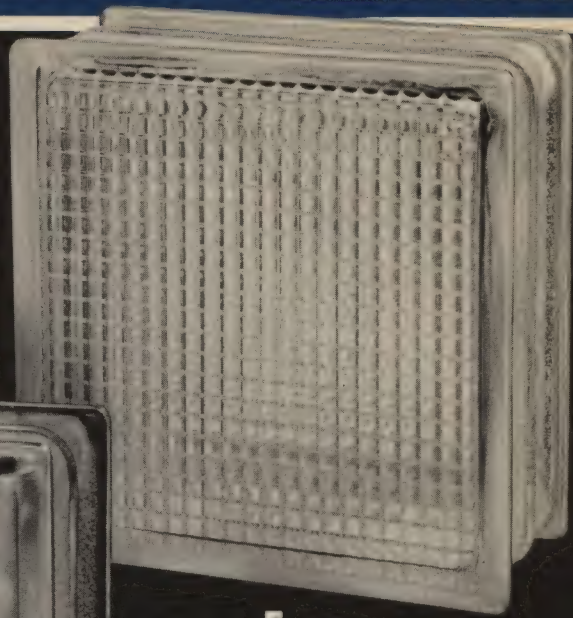


E

E. ARGUS LX-75 (With Fiberglas screen)*

1. Specially designed to provide softer, more diffused light with objectionable glare eliminated, and to reduce solar heat transmission.
2. The Fiberglas screen insert produces complete light diffusion and ideal obscurity, while reducing light transmission to 68% of the standard Argus pattern. Solar heat transmission is reduced to approximately 55% of the standard Argus pattern.
3. Smooth outside faces permit maximum cleanability.
4. Can be laid with flutes vertical or horizontal on room side with equally pleasing and efficient results.
5. Pattern description: Smooth outside faces, interior flutes identical and assembled at right angles. Fiberglas screen securely held in glass seal.

*Manufactured by Owens-Corning Fiberglas Corporation.



F

F. PRISM LIGHT-DIRECTING

1. Specially designed to control the direction and distribution of light.
2. By means of unlike prisms on two inside faces, the light is so distributed that the greater part of the incident light is directed toward the ceiling, practically none in direct vision or glare zone and very little downwardly.
3. This unit should not be laid below eye level. It is designed for laying with the smooth exterior face outside—the concave exterior flutes vertical and on room side. The block is marked "Top Inside" to indicate correct setting.
4. The smooth exterior face and rounded concave flutes on room side insure easy cleaning.
5. Pattern description: Exterior face smooth, room side face vertical concave rounded flutes. Unlike horizontal prisms on both interior faces.

NOTE: This block supplied in the 8" (7 $\frac{1}{4}$ " x 7 $\frac{1}{4}$ ") size only.

DESIGNED FOR PRACTICABILITY AND BEAUTY...

PC GLASS BLOCKS OFFER MANY ADVANTAGES

Combine the light transmitting values and beauty of glass with the insulating values of a masonry wall.

MORE DAYLIGHT

Bright, cheerful rooms are in demand for up-to-date homes. People like daylight—especially the flood of soft, diffused light that comes through a panel of PC Glass Blocks. This better lighting adds to home safety and provides eye-comfort. While cheerful sunlight streams in by day, beautiful lighting effects through the glass block panel decorate the home at night.

IMPROVED APPEARANCE

Homes that have the smart appearance of PC Glass Block panels are easier to sell. PC Glass Blocks, in beautiful patterns, are being used in many new homes today to add new beauty to kitchens, bathrooms, hallways—and many other places in the home where daylight is desired. With the use of radial and corner blocks, interesting bays and panels can be fitted correctly and charmingly into decorative schemes for almost any style of architecture. Interesting interiors can easily be created by using glass block panels for partitions, fireplaces, bars—and for many other attractive decorative units. PC Glass Blocks are well suited for use with other decorative materials. In themselves they are an interesting and flexible decorative medium.

BETTER HEAT INSULATION

Whether you are concerned with heating or cooling, glass blocks help answer the problem of heat control where large

light areas are desired. For PC Glass Blocks have less than half of the heat loss factor of ordinary single-glazed window areas—even less than that of double-glazed openings. In every PC Glass Block there is a partially evacuated, dead-air space between the two surfaces of glass. This is an effective, sealed-in heat retardant that saves money.

Thus temperature control and humidity control are much easier and less costly. Heating costs are reduced in cold weather. Air-conditioning systems are more efficient when light areas are built with PC Glass Blocks, for their lower heat conductance, and in particular their quite low solar heat transmission, materially reduce the air-conditioning load.

LESS SURFACE CONDENSATION

Where surface condensation on window areas is a problem, the use of glass blocks often proves advantageous. For moisture does not condense on the warm side of a PC Glass Block panel except under unusually severe temperature and humidity conditions. Consequently, glass block panels stay cleaner, too.

DIRT INFILTRATION ELIMINATED

Glass block panels are a valuable aid to the woman who wishes to keep her home spic and span. For they eliminate the bothersome infiltration of dirt that so frequently occurs, especially in urban areas. PC Glass Block panels let in great floods of light, but they don't allow a single speck of dirt to get through. The whole panel is sealed up tight. This factor is especially important to home owners who plan an air-cleaned heating system for themselves and wish to keep smoke from neighbors' furnaces away from their light-colored draperies or upholstery.

EASIER TO CLEAN

A whole panel of glass blocks is cleaned as one unit—not a small panel at a time. No mullions to clean—just a simple sweep of one smooth glass-and-cement area. Satisfactory cleaning can be done simply with a hose, and a long-handled brush, or a damp cloth. The translucent effect of glass block panels keeps them looking clean long after ordinary clear glass looks spotty or streaked from dirt particles.

LESS UPKEEP

With PC Glass Block panels for light-giving wall areas or partitions, maintenance costs are almost non-existent. No unsightly and dangerous corroded or rotted sash need be replaced. No costly and slow painting to be done. Once installed, the solid panel of glass and strong, clean mortar joints practically takes care of itself.

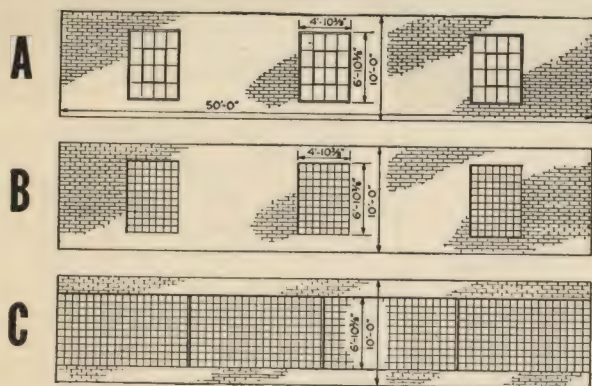
PC Glass Blocks make a permanent type of panel. Glass blocks are not easily marred or broken. Should replacement of an individual block be required, it can be done easily by a regular mason.

PRIVACY

Translucent glass blocks admit well-diffused streams of light—but they guard privacy. Unsightly views can be eliminated. Distracting views are shut off. PC Glass Blocks provide privacy so highly valued by many home buyers.

EFFECTIVE SOUND INSULATION

Glass Block panels substantially reduce distracting and undesirable noise. Even in noisy city surroundings, homes can have quiet and privacy. With glass blocks, even homes on busy corners can shut off the clatter from the street.



8" brick wall (area 50' x 10')— $\frac{3}{4}$ " plaster on furred metal lath. Temperature inside 70°F.—outside 0°F. Wind at 15 m.p.h.

A With 100 sq. ft. of single-glazed steel sash in three openings—

Heat losses—	
Through brick	8960 B.T.U. per hr.
Through sash	7910 B.T.U. per hr.
Through total wall area	16870 B.T.U. per hr.

B With 100 sq. ft. of 8" PC Glass Blocks in three panels—

Heat losses—	
Through brick	8960 B.T.U. per hr.
Through glass blocks	3430 B.T.U. per hr.
Through total wall area	12390 B.T.U. per hr.
Heat loss through light-transmitting area less than half, with a reduction of 26% of total heat loss through the entire wall.	

C With 340 sq. ft. of 8" PC Glass Blocks—

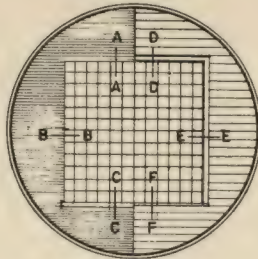
Heat losses—	
Through brick	3580 B.T.U. per hr.
Through glass blocks	11660 B.T.U. per hr.
Through total wall area	15240 B.T.U. per hr.
Heat loss 90% of panel A, but with twice as much light.	

NO OTHER SINGLE BUILDING MATERIAL OFFERS ALL THESE IMPORTANT ADVANTAGES

PC GLASS BLOCKS

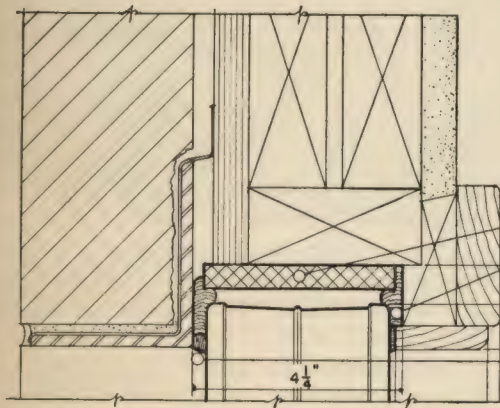
SCALE 3" = 1' 0"

PC expansion strips may be adhered to back of chases at head and jambs with asphalt emulsion. Chases must be plumb and clear of protruding mortar, etc.

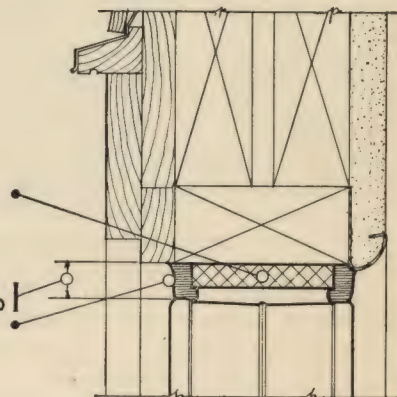


For dimensional data on wall ties, wall anchors and expansion strips, see page 13.

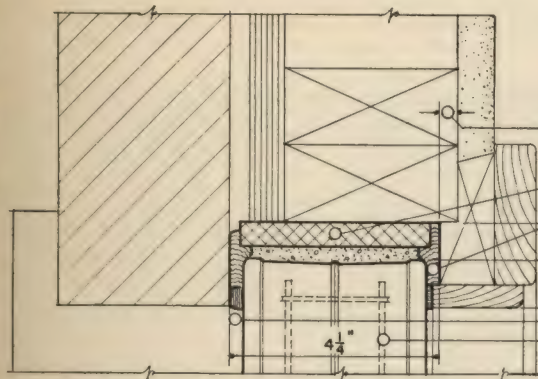
For panel size limitations and minimum anchorage requirements, see page 10.



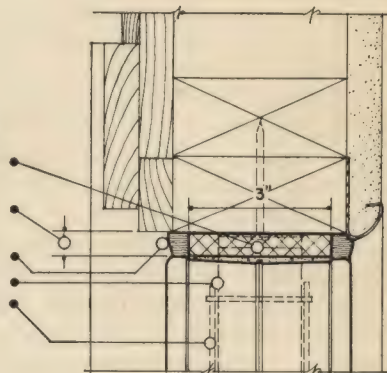
SECTION A-A



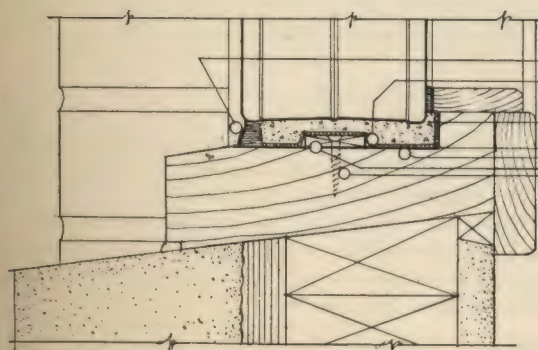
SECTION D-D



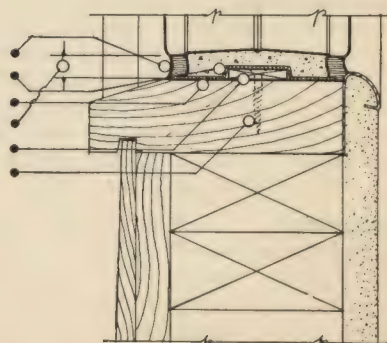
SECTION B-B



SECTION E-E



SECTION C-C



SECTION F-F

BRICK VENEER

WOOD FRAME

IN EXTERIOR BRICK VENEER AND FRAME CONSTRUCTION

CLOSED SPECIFICATIONS FOR PC GLASS BLOCK CONSTRUCTION

GENERAL CONDITIONS:

The "General Conditions" of the contract are a part of these specifications.

SCOPE OF THE WORK:

This contractor shall furnish all labor and materials to install all glass blocks where shown on the drawings or specified hereinunder. This shall include the furnishing and installation of all expansion joint strips, oakum packing, felts, shearlock bars, wall ties, wall anchors, calking, asphalt emulsion, and other labor and materials necessary for a complete installation. This contract does not include the preparation of the structure to receive the glass block panels, such as chases, stiffeners, etc., except as hereinafter specified.

MATERIALS:

Glass Blocks . . . shall be hollow, partially evacuated, clear colorless glass units as manufactured by the Pittsburgh Corning Corporation. Units shall be "all glass," formed of two halves fused together at a high temperature. Edges shall be so formed as to provide a "Key-lock" Mortar Joint. All blocks shall be coated on the edges with a grit-bearing, translucent, water-and-alkaline-resistant plastic material.

Patterns—Sizes—Shapes . . . shall be as shown on the drawings or as specified hereinunder:

(Indicate PC Patterns, sizes and shapes, and locations)

Expansion Joint Material* . . . where shown or required shall be pre-moulded type as shown or specified by the architect or as recommended by the Pittsburgh Corning Corporation.

*—Expansion strips are available in the following types:

Premoulded Cork No. 591—4" x 1/2" x 36"

Premoulded "Fiberglas"—4 1/8" x 1/2" x 25"

(Specify type desired—see also specifications under oakum)

Shearlock Bars . . . where required shall be of size and material shown on the drawings or as recommended by the Pittsburgh Corning Corporation.

Asphalt Emulsion . . . where shown on drawings or required shall be of such consistency as to provide a heavy even coat free of lumps and voids. This material shall be subject to the approval of the architect.

Wall Ties . . . shall be of steel double wire mesh formed of two parallel wires (.150" in diameter) with electrically welded cross wires (.105" in diameter) at regular intervals, and shall be galvanized. Wall ties shall be installed in horizontal mortar joints of all glass block panels as follows:

For 5 3/4" size blocks—Every four courses.

For 7 3/4" size blocks—Every three courses

For 11 3/4" size blocks—Every course.

Wall ties shall run continuously with ends lapped not less than 6 inches and shall run from end to end of panel. Wall ties shall not bridge expansion joints.

Wall Anchors . . . where shown on drawings and as recommended by the Pittsburgh Corning Corporation shall be No. 20 gauge perforated steel strips 24 in. long by 1 3/4 in. wide galvanized after perforating. All wall anchors must be crimped within expansion joints, and shall generally be placed in the same joint as wall ties and must be completely embedded in the mortar joint of the glass block panels.

Mortar . . . shall be one (1) part Portland Cement, and one (1) part lime, and four (4) to six (6) parts sand measured by dry volume, mixed to a consistency as stiff as

will permit good working and shall be drier than for ordinary clay brick work.

Mortar for exterior panels shall contain a metallic stearate type waterproofer. This shall be of an integral waterproofing type added at the time the mortar is mixed, or a waterproof Portland Cement incorporating a metallic stearate.

Mortars prepared from masonry cements of low volume change mixed according to the recommendations of the manufacturer may be used if desired. Setting accelerators should not be used and freezing must be prevented without the use of anti-freeze compounds.

Cement . . . shall be a standard brand conforming with the specifications of the American Society for Testing Materials, A.S.T.M. Designation C9-30.

Lime . . . shall be of an approved brand high calcium well-slaked quicklime, hydrated lime, or masons' hydrate, conforming respectively with A.S.T.M. specifications C5-26 and C6-31. Where lime in the form of putty is used it shall be added on the basis of "lime solids" content.

Sand . . . shall be free from silt, clay and loam in excess of 3% by weight as determined by decantation. Not more than 5% by weight shall pass a No. 100 mesh sieve and 100% shall pass through a No. 8 mesh sieve.

Oakum . . . where indicated on drawings* or required for lateral cushioning of glass block panels at jambs and head chases, shall be of non-staining lightly oiled type and shall be subject to the approval of the architect.

*—Premoulded expansion joint material is preferable, but shredded oakum loosely packed may be substituted in expansion joint spaces at jambs and head in chase construction.

Calking . . . mastic calking compounds as approved by the architect shall be applied evenly and to the full depth of recess provided at both interior and exterior perimeters of all glass block panels.

FLASHINGS:

Unless otherwise specified this contractor shall furnish and install in locations shown or where required, such flashings as are necessary to provide a complete installation.

INSTALLATION:

Expansion joint strips shall be adhered to the jambs and heads with asphalt emulsion and shall run continuously in the expansion space and must rest directly on sill. Apply heavy coat of asphalt emulsion to sills permitting same to dry at least two hours before laying mortar.

All mortar joints must be completely filled with mortar. Mortar must not bridge across expansion joints. Mortar joints shall not be furrowed. Blocks shall be laid up plumb, true to line with courses level and with 1/4" visible mortar joints. While mortar is still plastic and before final set, the joints shall be compressed to a depth necessary to expose the corners of the blocks as sharp clean lines and joints immediately tooled, slightly concave and smooth. The number of courses of glass blocks laid in successive lifts shall be limited to prevent compaction of joints.

CLEANING:

While mortar is still plastic and before final set, this contractor shall clean off all mortar and foreign material from the glass block surfaces. Final cleaning shall be done by others, after mortar has reached its final set.



A Pittsburgh Structural Mirror above the mantel is a simple way to give a living room spaciousness, life and sparkle. This use of glass is increasingly popular.

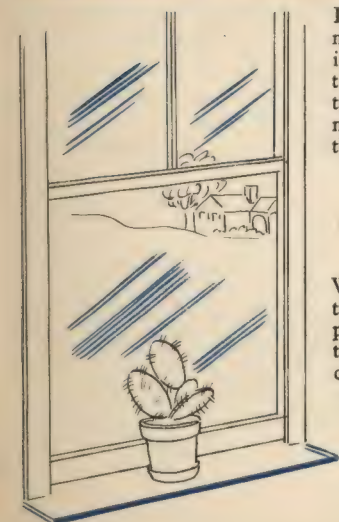


Wainscoting of polished, beautiful Carrara Glass dresses up a bathroom or kitchen immeasurably. It is easy to clean, permanent, impervious to moisture and chemicals.

SUGGESTIONS FOR THE USE OF PITTSBURGH GLASS PRODUCTS IN THE HOMES YOU BUILD



Lots of light on the staircase makes it safer. PC Glass Blocks in the stairwell are new and attractive. They improve the exterior appearance of a house, and make it quieter, too . . . for they deaden outside noises.



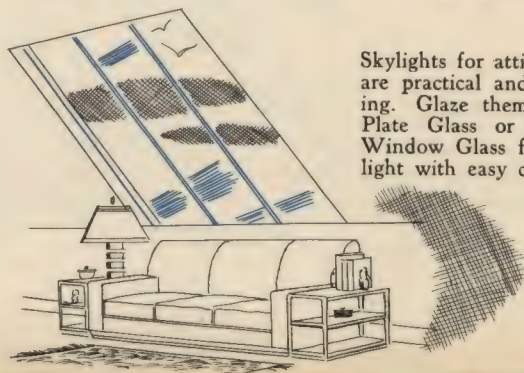
Window sills of Carrara Structural Glass are smart-looking and practical. Moisture cannot harm them—and wiping with a damp cloth keeps them clean.



Partition treatments of PC Glass Blocks, with niche lining of plate glass, Carrara, or mirrors, are simple but effective.



A full-length mirror lets a woman see herself as she really is. Easily applied over any door, such a mirror is useful and decorative.



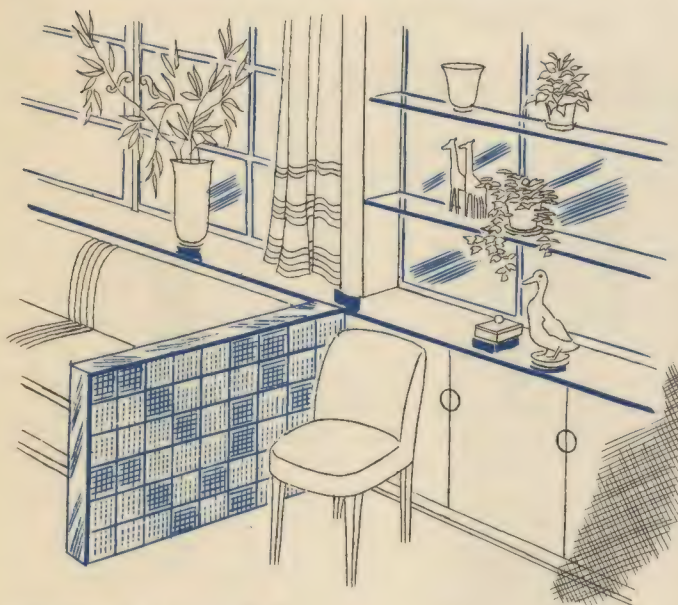
Skylights for attics or studios are practical and good looking. Glaze them with Vista Plate Glass or Pennvernion Window Glass for plenty of light with easy cleaning.



Windows are important in a home's appearance and livability. Well designed windows, glazed with Pennvern Window Glass, are sure to give satisfaction.



Glass shelves are one of the newest ideas for the modern home. As shown here, plate glass shelves in front of a mirror make a most attractive niche for bric-a-brac.



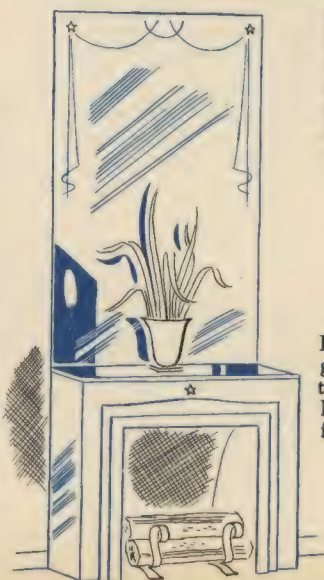
Solariums offer a wide scope for the use of glass. Vista Plate Glass windows admit the sunlight, plate glass window shelves make window areas interesting. Sill covers of Carrara, and a semi-partition of PC Glass Blocks complete an attractive room.



HOW TO USE PITTSBURGH



French doors like these, opening from living room, dining room or library, are always popular. Glaze them with Pennvern Window Glass for beauty and good vision.



Shut off that unattractive view with PC Glass Blocks . . . and you won't have to sacrifice daylight. A smart corner panel provides light from two directions, makes rooms more comfortable and easier to heat, because of PC Blocks' high insulating value.

Fireplace facing of beautiful plate glass mirrors, extending from floor to ceiling, can make any room lovely. Remember, you can get special effects by using colored mirrors.



A decorative terrace wall of PC Glass Blocks is new, different and attractive. It gives welcome privacy, a sense of coziness, and is a wonderful windbreak, too.

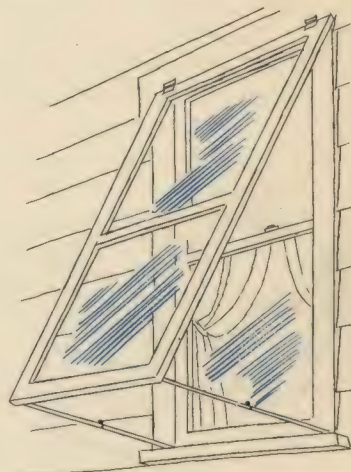


Use Vista Plate Glass for glazing windows which overlook a nice view. For this brilliant, reflective glass assures perfect, undistorted vision from all angles.

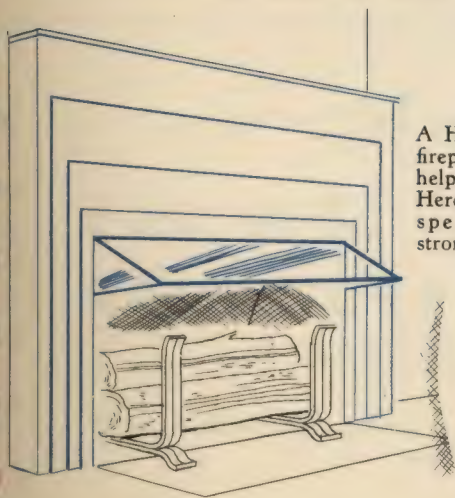
GLASS PRODUCTS . . .



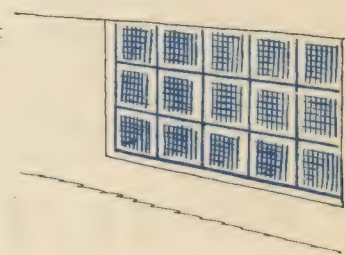
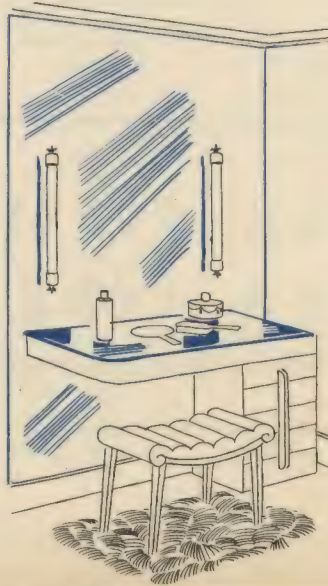
A bar built with PC Glass Blocks, and gayly lighted from behind, is modern, friendly and tasteful. It is easy to keep clean, for PC Glass Blocks can be washed easily with a damp cloth.



Winter windows greatly reduce heat loss in the home in winter, keep inside temperatures uniform. Use Pennvernon or plate glass. And PC Glass Blocks make good basement windows, for light and insulation.



A Herculite Plate Glass fireplace screen like this helps a fireplace to draw. Herculite is glass that's specially treated to be strong and heat resistant.



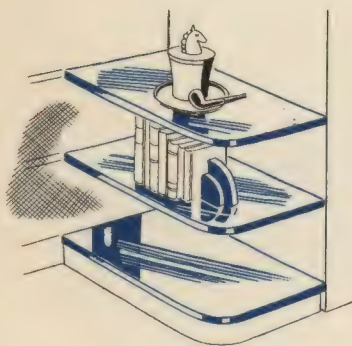
The powder room is an important feature in the newer homes. Make it outstanding with a mirrored wall, and a make-up shelf of Carrara or plate glass which is proof against spilled cosmetics.



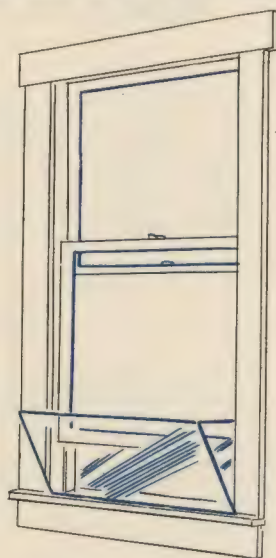
A sun porch, they say, is one of the most popular and lived-in rooms in the house. To invite the sunlight, and assure satisfactory vision, glaze the sun porch windows with Pennvernon Window Glass or Vista Plate Glass.



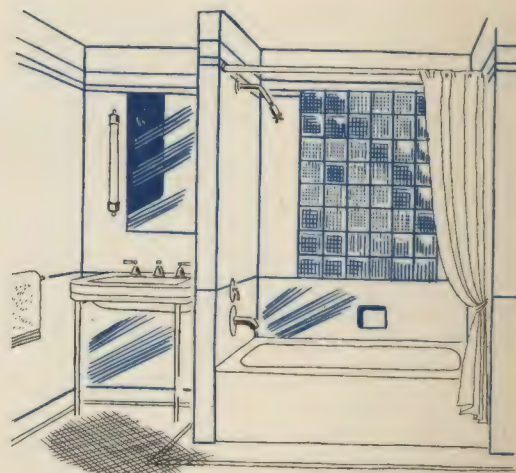
The front door can be made extra-inviting by PC Glass Blocks surrounding it. They bring lots of daylight into the hall, and say "hello" to guests.



And here's an idea for corner shelves—all of Carrara Glass—or Heavy Plate Glass if you prefer. They have the polished, lustrous appeal which only brilliant, reflective glass can provide.



Ventilators of plate glass or Pennvernon combine good looks with real utility. They prevent drafts at open windows, and protect rugs and furniture indoors from the elements.



PC Glass Blocks over the bathtub are a definite addition to bathroom beauty. They assure good lighting, and are especially effective when used with Carrara walls and lovely mirrors.

PITTSBURGH PLATE GLASS COMPANY PITTSBURGH CORNING CORPORATION

Grant Building, Pittsburgh, Pennsylvania

Products available through branch offices in principal cities and through W. P. Fuller & Co., on the Pacific Coast.

Mr. Dealer:

Clay Products and Profits are a Perfect Two-Some, a Natural Winning Pair

Consumer Dictates the Demands on Building Markets

A housing consciousness has swept across the country in the past five years, bringing the consumer into closer relationship with his building material source of supply. The consumer, however, is undergoing a constant change, his desires assert themselves in definite terms, his investments are being made with great shrewdness, his buying capacity influences products and their applications. He is the final authority when he spends his money, and the service he asks must be delivered by industry.

Dealer is the One Who Can Sense What the Buyer is Thinking About

You, Mr. Dealer, above all others are the first to feel the effects of any preference shifts the consumer makes. Manufacturers get the rebound. Production lags or it grows based on the accuracy of your analyses of these shifts. This great truth is one that the brick and tile manufacturers accept without a single reservation. You are the man who meets the buyer of building material, every day, in business, at the club, in church, in civic affairs. His mental processes are clear to you, you know what he is thinking about, you know how and when he can be sold and how to apply the services that completely satisfy him. Every consumer in your selling area is your market. Advise and guide him, see that he gets what he wants. Whatever you sell him must have Quality, Beauty, Security and Real Substance. You cannot afford to disappoint him.

Successful Dealers Operate "One Stop Building Station"

Acquiring or building a home should be made a simple matter. Instead of it being a complicated venture which necessitates endless conferences with the architect, realtor, contractor, building material dealer and financial institution, involving time and confusion to the point of being a deterrent to a desire for home ownership, building a house can be boiled down to almost an "over the counter" proposition. You, Mr. Dealer, are in the best position to cut through the intricate maze and give complete service in a "One Stop Building Station." By having a variety of plans available covering different sizes of homes and varying in architectural treatment, and by establishing contacts with local architects, contractors, realtors and financing organizations, you can easily guide the prospect through the pre-building and subsequent stages and at the same time keep in close contact with the prospect. Your "one stop station" Mr. Dealer, will furnish a service that simplifies, and greater simplicity in acquisition will increase sales.

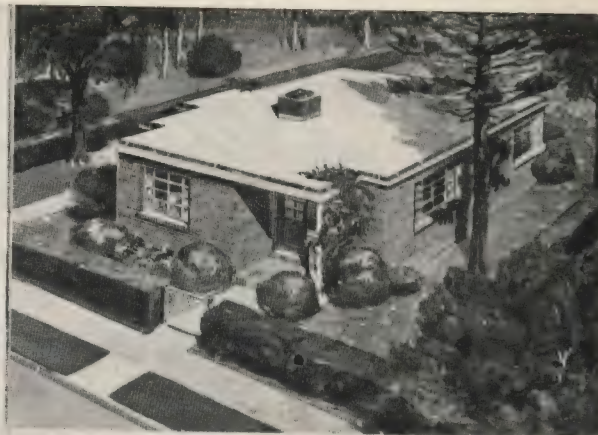
Clay Products Manufacturers Eager To Help You Satisfy the Consumer

This folder speaks directly to you, Mr. Dealer, because the consumer is your friend and neighbor and you, in turn, are going to speak to him. When you talk to him about Brick and Structural Tile you want to be able to tell him the **Real Facts**. Then, when you sell **Brick** and **Tile** for his new house, his barn, his garage, his silo, or his garden walks and walls, he will know what he's getting and his satisfaction will experience no **Let-Down**. Look these pages over carefully and you will discover that Brick and Tile mean Sales and **Sales Mean Profits**.



REG. U. S. PAT. OFF.

THE NATIONAL AUTHORITY ON BRICK AND TILE CONSTRUCTION



term credit for home
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finances should you
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ING BEAUTY

HOME DESIGN NO. 17

This design covers the demand for an
extensive of modern and durable construction
in a home. The efficient arrangement
of the floor plan and the inclusion of a
basement lot with a utility room, provides
security. The design also meets the demand for
security in the two bedrooms, furnish the
modern requirements. The durability in con-
struction comes from the exterior brick of
permanent fire and time resisting facing
brick. This is a happy combination making
it a home that will be welcomed in the
community. In the design a spotted light
colored brick was utilized as shown in the
panel but various preferences can be exer-
cised in a choice made from a wide range
of colors and textures.



FLOOR PLAN

Plans and specifications, complete in every detail, for each of the 23 moderately priced homes illustrated in Colorful Brick Homes, together with bound editions of bills of material for each home, and copies of Colorful Brick Homes, in any quantity desired, are also available from the

**NATIONAL PLAN SERVICE
1315 W. Congress Street
Chicago, Illinois**

Write for prices or further information

YOUR CLAY PRODUCTS LIBRARY OF FACTS

Mr. Dealer, here is a compilation of valuable information on structural clay products, presented in various forms and covering a diversity of home construction phases, that will enable closer and more beneficial contact with the consumer public. A close study and judicious use of these up to the minute publications will keep you in tune with the changing horizon of public aspect.

Successful selling to a quiz-conscious public means that all answers must be readily available, and in this respect, the ever growing clay products library of facts will supply all details, facts and information necessary to make the selling of clay products a pleasant and profitable part of your business.

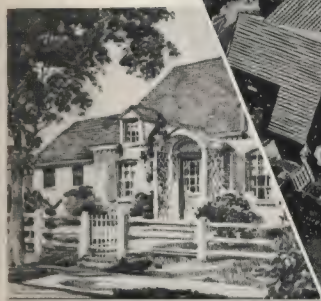
Note how completely the literature made available for your use by the Structural Clay Products Institute covers the field. Regardless of what information is requested, be it the desire for full data on a complete brick or tile home, a mere touch of interior or exterior refinement, or a difficult technical

problem, the answer is available in one or more of these publications.

Let it be supposed that your prospect, a man and wife, are interested in building a home. Their interest will immediately be increased when you show them **COLORFUL BRICK HOMES, YOUR HOME OF BURNED CLAY MASONRY and OWN YOUR OWN HOME.**

COLORFUL BRICK HOMES features twenty-three well designed homes all within the moderate price field, for which complete building plans and specifications are available. This publication is completely illustrated in color which portrays, with no need for any visualization on the part of the prospects, the warm and harmonious beauty of brickwork. Here, truly, is an interest building publication that faithfully portrays the picture in the hearts and minds of your prospects.

YOUR HOME OF BURNED CLAY MASONRY adds to the zest and appeal of home ownership. Its 16 pages of clay products information, written in easily understandable



OWN YOUR OWN HOME

layman's language, helps materially to present your sales argument for brick and tile construction. The envelope of loose leaf design sheets carried by this book gives additional ideas on exterior design and interior arrangement.

OWN YOUR OWN HOME tells exactly how that is most easily accomplished. This book features seven small home designs for which plans and specifications, complete in every detail, are available. In addition, it leads your prospect, step by step, through the various stages of home ownership. Nothing is omitted in the valuable suggestions covering all points from selecting the building site, on through designs, interior finish, architectural advice, financing, contractual arrangements, specifications and final ownership. This publication goes far in eliminating the alarm with which prospective home owners mentally view the conjured up intricate maze of confusing procedure leading up to home ownership. It definitely simplifies home acquisition and hence increases home selling possibilities.

Should your prospect merely be interested in that simple addition, either within or without, **THE HEART OF THE**

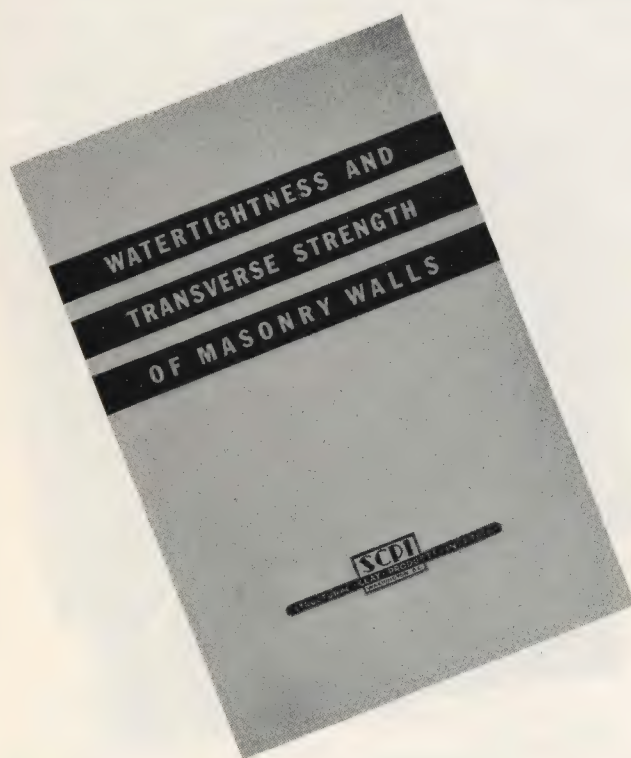
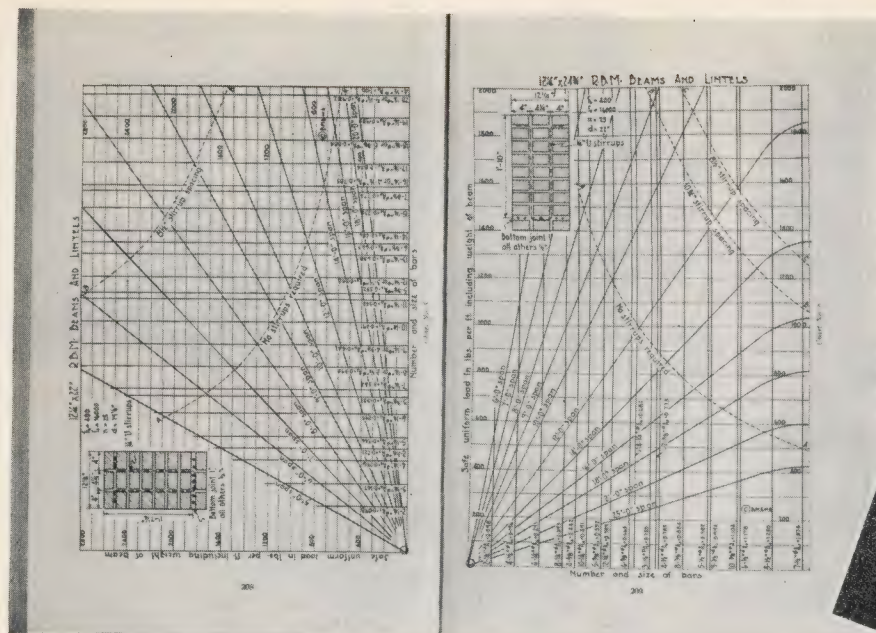


THE HEART OF THE HOME...

With
DESIGNS AND CONSTRUCTION
DETAILS FOR INDOOR AND
OUTDOOR FIREPLACES



HOME and **OUTDOOR LIVING** will be viewed with interest. Fireplaces are truly the gathering spot for the family and are more and more adding their full measure of grace, beauty and warmth to our homes and lives. And in the summer the charm of the fireplace is carried to the outdoors among a setting of terraces, stairs, garden walks, pools and other artistic creations of masons' craftsmanship and beauty of brick. These two publications create interest and furnish ideas that result in ever increasing sales to those who did not realize that they were potential customers.



No engineering or technical problem concerning clay products need be left unanswered when you have in your possession **BRICK ENGINEERING**, **RECOMMENDED MORTAR FOR CLAY PRODUCTS MASONRY** or **WATERTIGHTNESS AND TRANSVERSE STRENGTH OF MASONRY WALLS**.

BRICK ENGINEERING, a 400 page fabrikoid bound book, represents the latest in details and design in brick construction. It is replete with facts, data, tables, charts and illustrations, and has generally been characterized as the most complete single volume on brick engineering ever published. Its recommendations are up-to-date, its specifications current and its presentation of the latest available authentic technical data on the subject makes this book invaluable to all users of brick in any type of construction.

RECOMMENDED MORTAR FOR CLAY PRODUCTS MASONRY and **WATERTIGHTNESS AND TRANSVERSE STRENGTH OF MASONRY WALLS** fully cover their respective subjects. These are vital subjects, since mortar and water penetration have been discussed pro and con in the building industry for many years. These books throw the light of truth on the two subjects and hence become valuable assets to the dealer when confronted with arguments based on erroneous evidence or false conjectures.

These publications are available in single copies or quantity lots for general distribution. Their use is invaluable in creating interest and developing sales. Write your manufacturers of brick or tile for a price list or communicate directly with **Structural Clay Products Institute, Washington, D. C.**, the **National Authority on Brick and Tile Construction**.

These Simple Technical Facts Will Help Sell More Brick and Tile

BASEMENT

Livability

The present trend in home design is to include more and more living space in the basement of the house. Recreation rooms, dens, and work shops or offices may be located in the basement thus utilizing space that was formerly of little value to the owner.

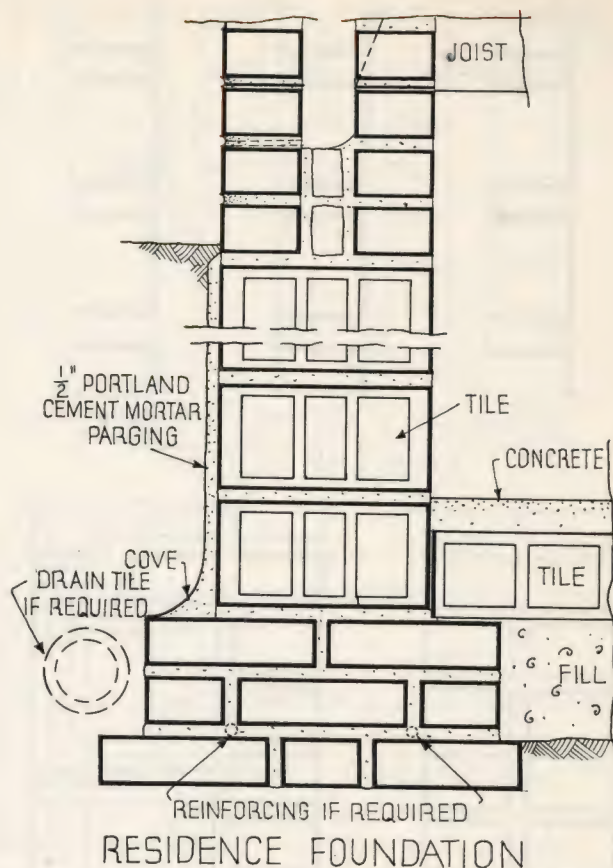
Structural tile for basement walls and floors are particularly well adapted to this modern trend and design. Hollow tile foundation walls are dry and warm. Moisture condensation or "sweating" which occurs on many walls below grade is eliminated due to the low coefficient of heat transmission of the tile wall, and the dead-air space in the tile floor guarantees a warm floor which adds materially to the comfort of the occupants.

Economy

The cost of tile basement walls and floors is very little more than the cost of other types of construction and if furring and plastering (unnecessary if tile is used) are included in the cost, the tile basement will cost less than other types of construction. Structural tile for basement walls are available in a wide range of attractive shades including buffs and greys.

Walls

Foundations may be solid brick, structural clay tile, or brick and tile. Footings should rest on solid ground. Walls and footings in unexcavated portions should extend 2'-6" below grade or to frost line. Footings should be reinforced where they cross unfilled trenches or similar soil conditions. Foundation walls at corners should be of solid masonry; and jambs of

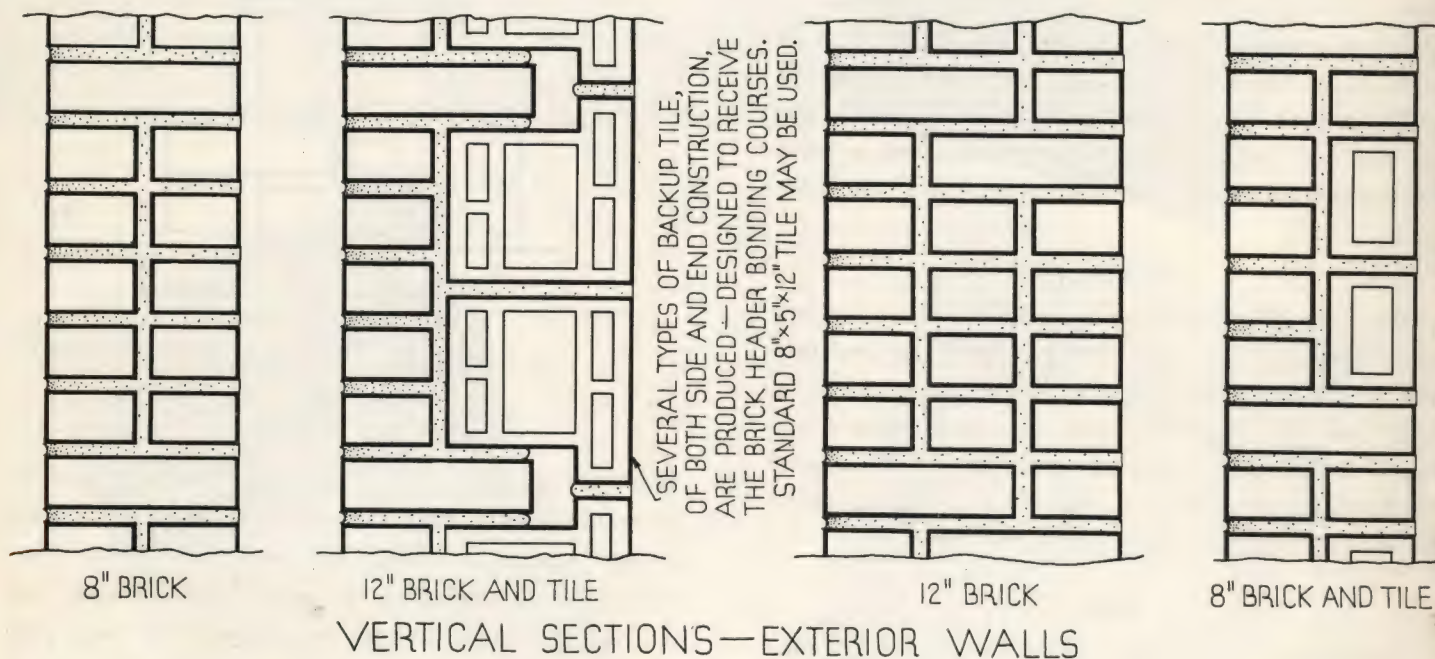
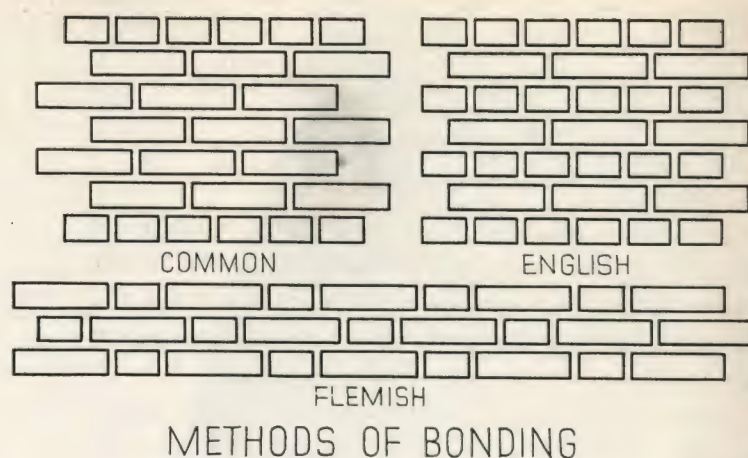
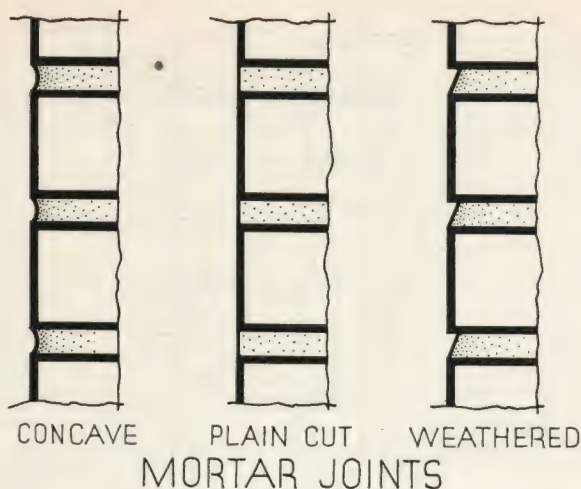


doors or openings in the foundation walls should be of solid masonry construction. The top two courses of all foundation walls, upon which the joists bear, should be of solid masonry continuous. Where clay soil exists, dampproofing consisting of $\frac{1}{2}$ " thick coat of mortar, or a coat of creosote oil and two coats of coal tar pitch should be applied. For walls that may be subjected to conditions approaching hydrostatic pressure, membrane waterproofing should be used.

Floors

For basement floors, as illustrated, earth shall be leveled off and tamped to a hard surface. A leveling bed of cinders, gravel, or granulated slag about 6" thick may be placed upon the ground and should be wetted and thoroughly tamped. Structural clay tile (size: 12" x 12" x 3", 4" or 5" thick) should then be placed over the entire floor. A concrete topping is then placed upon the tile consisting of one part portland cement to four parts of sand. Before topping is placed, the tile should be thoroughly wetted. Surface should be finished with a steel or wood float. The thickness of the slab may be 1 $\frac{1}{2}$ ". The slab surface should be pitched to the floor drain.





EXTERIOR WALLS

Bond

Bond in the structural sense means to bind and refers to the method of laying brick units so that by their overlapping, the entire mass of masonry is thoroughly tied together. This structural bond results in the formation of a pattern on the exposed face of the masonry which is also called bond. Patterns most commonly used are illustrated above.

Bonds may be emphasized by the use of differently colored brick or by changing the type of exposed joint. Geometric patterns may be formed of brick but they should be carefully designed to be appropriate and in proper scale with the elevation.

Jointing

Joint thicknesses affect to some extent the strength and resistance to moisture penetration of a wall. For standard brick the use of a mortar joint not exceeding 1/2" in thickness is recommended. Three types of exposed joints are illustrated above.

The color, profile and texture of joints will affect to

a marked degree the interest and quality of the finished wall. Color of the joints should be kept uniform despite graduations in the brick shading. Dark colored mortar tends to subdue shadows and deepens the tone of the wall. Light or natural colored mortar gives a play of brilliant shadows.

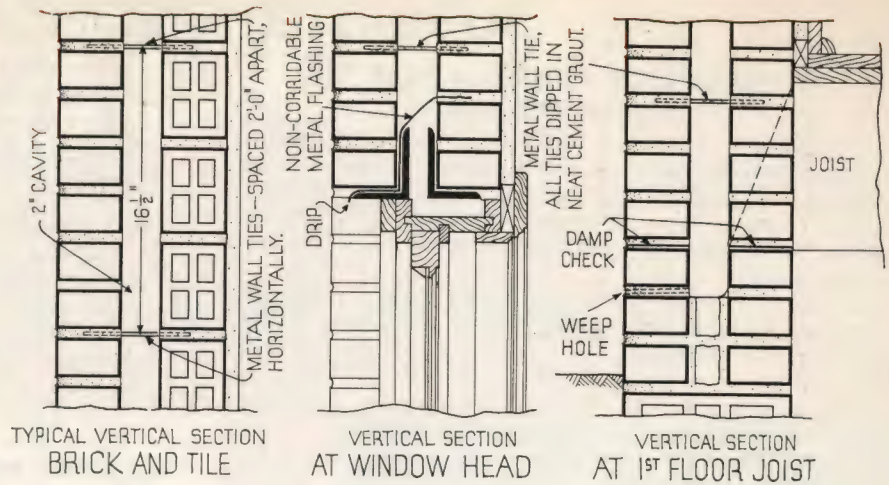
Tool joints (as illustrated by "concave" and "weathered") which compress and spread the mortar after it has set slightly produce the best weathering properties. Concave joints are simplest to form.

Wall Assembly

Structural tile load-bearing units for backing up are available in a variety of sizes that bond with standard size brick. The illustrations above indicate the more common methods of bonding facing brick and structural tile either through the use of header-backer units or backup brick used in conjunction with conventional shapes. The design of most header-backer units is covered by patents, however, there are a number of such units available and the competition on this type of unit meets the Federal Government's requirements for patented units that may be specified on federal work.

CAVITY WALL

The cavity wall is not a new type of construction. It has been used for many years, particularly in England and Australia, and there are many buildings in this country constructed of cavity walls with masonry ties. The cavity wall with metal ties is becoming more and more popular in this country because the continuous air space, or cavity, forms a barrier to the penetration of moisture and acts as insulation against the loss of heat.



Two wythes of masonry, composed of either structural clay tile or brick, or a combination of both, separated by a 2" space, may be used as a cavity wall. Metal ties, dipped in neat cement grout, at the job, to prevent corrosion, are used to bond the two wythes. The tie may be formed of a 1/2" round bar, bent in the shape of a "Z," or of a 3/16" round rod doubled in the shape of a "U." Ties should be spaced 2'-0" apart and placed in every sixth horizontal brick joint, vertically.

The bottom of the cavity should be below the damp-proof course, but above ground level. The more preferred type of construction has small weep holes at intervals in the vertical brick joints, sloping from the bottom of the cavity to the outside of the wall.

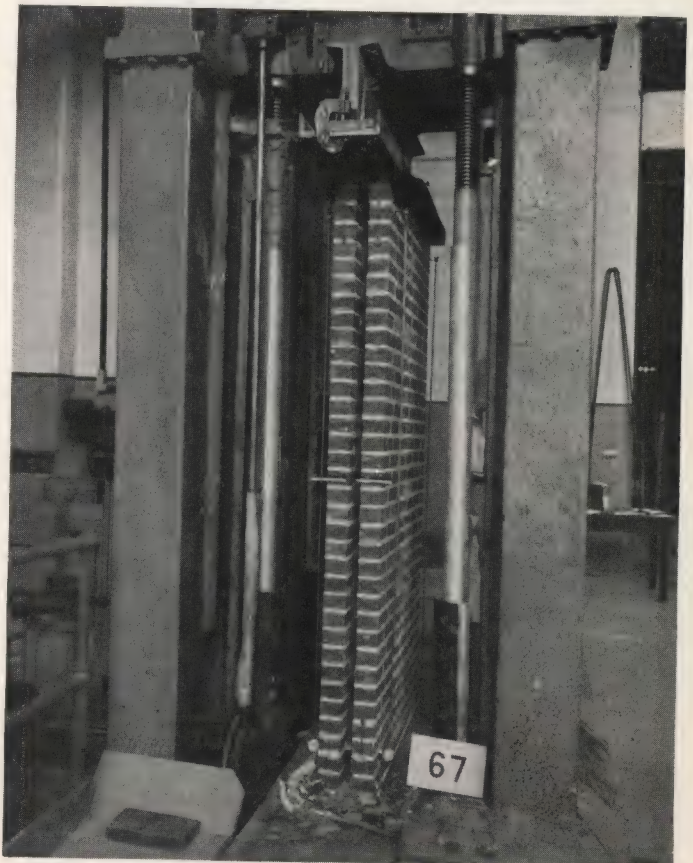
Flashings at openings, such as doors and windows, should extend at least 6 inches beyond the jambs. The same care should be taken in parapet walls superimposed on cavity wall construction, as on solid walls, to insure the watertightness of the coping and to eliminate the entrance of water into lower walls.

Tests conducted at the National Bureau of Standards, and reported in BMS Report No. 24, indicate that the cavity wall as illustrated has ample strength to support loads usually present in buildings for residential or office class of occupancy up to two stories in height. Under heavier loads the inner wythe should be increased to 8" thickness.

Due to the low coefficient of heat transmission of the cavity wall plaster may be applied direct to the inner wythe of the masonry thus eliminating the expense of lath and furring, or an interior facing material may be used for the inner wythe. Attractive housing has been constructed, with U. S. H. A. financing, using

cavity wall construction in which the inner wythes of the exterior walls are constructed of buff or grey facing units unplastered.

In many localities the cost of cavity wall construction is less than solid construction furred, lathed and plastered and only slightly above the cost of frame construction. Cavity walls cannot leak. Like other types of clay product walls, they are permanent, fire resistant and require no maintenance. Plaster cracks due to shrinkage of the structural frame are eliminated.



SUGGESTED SPECIFICATIONS

RESIDENCE CONSTRUCTION

Masonry Materials

1. Facing brick shall be burned clay or shale, or mixtures thereof and shall be sound, whole, and selected for soundness and lack of chipping. Brick shall have a minimum compressive strength of 2500 lbs. per sq. in. The color and texture shall be as selected by the owner.

2. Backup brick shall be burned clay or shale, or mixtures thereof and shall be sound and whole. They shall have a minimum compressive strength of 2500 lbs. per sq. in. Brick used in foundations shall be hard-burned and shall have a saturation coefficient (ratio of absorption by 24-hour submersion in cold water to that after 5-hr. submersion in boiling water) of 0.80.

3. Structural clay tile for foundations and backup shall be burned clay or shale, or mixtures thereof. Tile shall be sound, hard-burned, and free from distortions. Surfaces to receive plaster shall be scored. Tile shall conform to A. S. T. M. Specification C34-39 for load-bearing structural clay tile; Grade LBX shall be used for foundation walls, and Grade LB shall be used for backup of exterior walls above grade.

4. Mortar Materials

- (a) Portland cement shall be a standard brand, approved by the owner and delivered to the job in original containers.
- (b) Lime putty shall be made of a standard quality quick-lime, properly slaked and soaked for the period recommended by the manufacturer.
- (c) Hydrated lime shall be soaked for at least 24 hours prior to use.
- (d) Sand shall be well-graded from fine to coarse, clean, sharp, and free from loam and other foreign matter. Water shall be free from acid alkali, salt, or other deleterious substances.

Workmanship

1. General.

- (a) All brick shall be laid in full mortar beds of uniform thickness; head joints shall be carefully formed by buttering the ends of stretcher bricks and the entire edges of header bricks before shoving into place to form completely filled joint. Solid masonry walls either of brick or brick and tile shall be parged back of the facing brick.
- (b) Structural clay tile units shall be laid with full bed and head joints unless the particular unit used is especially designed to form an interrupted mortar joint. All masonry shall be laid plumb, true to line, and level.

2. Bonding. Where solid brick or solid brick and tile masonry is used, there shall be at least one header per 72 sq. in. area of wall surface.

3. Mortar. For exterior brick and tile walls above grade, and for chimneys, use a mixture of 1 part cement to 1 part of lime putty to 6 parts of sand, proportioned by volume. For brick and tile masonry below grade, for foundations and area walls and walks and brick platforms, use a mixture of 1 part cement to 3 parts of sand by volume, to which may be added lime putty not to exceed 15 per cent of the cement by volume. The use of patented or prepared mortars, admixtures, and mortar colors shall be agreed upon by the owner and contractor.

4. Joints. Joints in exterior walls below grade shall be trowel-pointed. Joints in exterior walls above

grade shall be tooled with a round jointer just prior to the initial set, to form a concave joint and to compact the mortar into the joint and against the bricks. Course height shall average $2\frac{3}{4}$ " and no mortar joint shall exceed $\frac{3}{4}$ ".

5. Cleaning. Exterior brickwork shall be cleaned on completion. If wire brushes and water do not suffice, the surface shall be thoroughly wetted first with plain water and then a solution of not more than 1 part hydrochloric (muriatic) acid to 10 parts water, shall be scrubbed on (taking care to protect all sash, lintels, metal, etc.) and immediately rinsed off thoroughly with clean water.

6. Caulking. Outside joints at the perimeter of exterior door and window frames should not be less than $\frac{1}{4}$ " nor more than $\frac{3}{8}$ " wide and shall be cleaned but to a uniform depth of at least $\frac{3}{4}$ " and filled solid with an approved elastic caulking compound forced into place with a pressure gun. Caulking compound shall be elastic and waterproof and shall gradually form a thin, tough skin on exposed surfaces while remaining plastic indefinitely beneath the surface. It shall be of such quality as not to be affected by long exposure to extremes of outside temperature.

11. Bearing. Joints and beams shall not bear directly on hollow unit masonry. Solid masonry equivalent to two courses of brickwork in height shall be built under bearing continuous in wall at this level. Provide four courses under steel beams. See typical details. Steel bearing plates are to be installed where shown on drawings.

12. Window Sills. Sills shall be of brick laid on edge with full beds and joints of 1:3 mortar, laid with a minimum slope of 2" to the foot, and with lower edge projecting not less than 1" from face of wall, to form a drip.

RECOMMENDED MORTARS

(all proportions by volume)

Recommendations are in general applicable to exposures and construction practices prevailing in the northeastern quarter of the United States. They are based upon field experience and technical data now available.

All of the ingredients of the mortar mixes suggested should conform to A. S. T. M. or other standard specifications. Lime putty refers to well slaked quick lime or hydrated lime that has been soaked prior to use.

1. 1 cement: 1 lime putty: 5 to 6 sand.

Suitable for general use above grade and recommended specifically for parapet walls, chimneys and exterior walls subject to severe exposures, also for structural clay tile construction.

2. 1 cement: 2 lime putty: 7 to 9 sand.

Suitable for non-load-bearing walls either interior or exterior not subjected to severe exposures, also load-bearing walls in which unit compressive stress is not excessive. (Building code requirements may be used as a guide.)

3. 1 cement: $\frac{1}{4}$ lime: $2\frac{1}{2}$ to 3 sand.

Suitable for general use and recommended specifically for reinforced brick masonry and plain masonry below grade or in contact with earth, such as foundations, retaining walls, walks, sewers, manholes, and catch basins.

The properties of masonry cements vary widely and no attempt has been made to include them in the above list. However, experience and test data indicate beyond doubt that certain of the masonry cements produce mortars that are suitable for general use.

Truscon

STEEL BUILDING PRODUCTS

Modern building demands modern building materials. Present day construction methods include no provision for materials that do not recognize highest quality and low cost. The building, whether it be commercial or residential, has never been built but what it NEEDED Truscon Quality Products. The name TRUSCON is inseparably bound to the twin elements of QUALITY and PERMANENCE.

The history of Truscon achievement is written in the rapid advancement of better building. Always a staunch supporter of improvement, it has, for over a quarter of a century unstintingly placed its entire engineering and manufacturing facilities at the disposal of those who recognized the importance of permanence, quality and economy. Keep in step with the March of Progress by availing yourself of the opportunities for profit that day by day are increasing. For, each time you deliver Truscon Products to the job, you have not only contributed to better building but you have created another satisfied customer . . . at profit to yourself.

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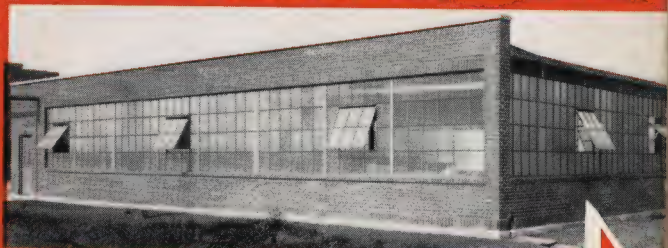
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TRUSCON RESIDENTIAL DOUBLE-HUNG WINDOWS (Series 138)

(Packaged for Protection)

These modern steel windows combine the latest features of design, construction and operation. Yet their moderate cost brings all these features within easy reach of small home builders. Compare the following advantages of Truscon Residential Double-Hung Steel Windows with ordinary windows:

Bonderized Steel resists formation and progress of rust.

Baked-on Priming Coat of Paint lasts from three to five times longer.

Tubular Sash Rails add greatly to strength and appearance.

Spring Balances equipped with tapes of ENDURO Stainless Steel. Smooth, positive action, quiet operation and "trouble-free" service assured.

Spring Bronze Weatherstripping (factory installed) assures weather-tight windows.

Attractive Hardware (factory installed). Standard hardware is ENDURO Stainless Steel, brush finish. Solid bronze hardware available at slight extra cost.

Flush Installation of Truscon Screens and Tempyte Insulating Windows provided by the

rebate on exterior of frame. Two types of screens available.

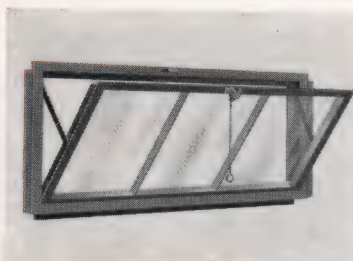
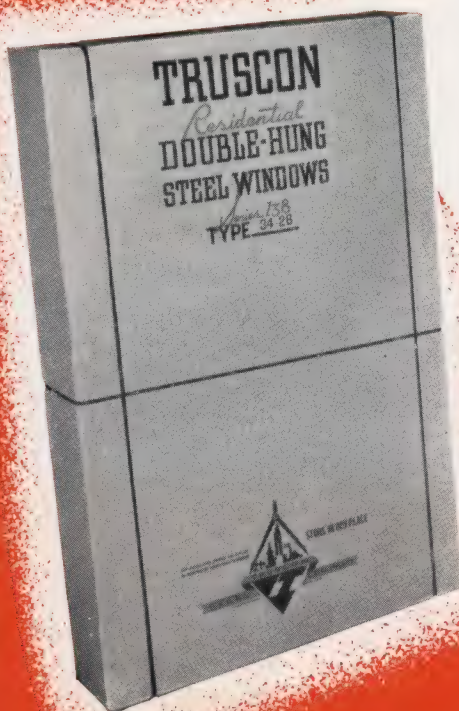
Four Types and Twenty-Four Sizes in each type of Truscon Residential Double-Hung Windows.

Assembled and Packaged at Factory (See description at left).

Complete Information contained in Truscon Steel Window Catalog Series 138. Send for copy.

PACKAGED WINDOWS!

Truscon Residential Double-Hung Steel Windows (Series 138) are packaged in strong, durable cartons for maximum protection right up to the time of installation. All hardware is installed at factory. No field assembly required. Quick, easy installation is assured in any type of construction.



TRUSCON BASEMENT WINDOWS

Made of heavy, hot-rolled sections. Bonderized. Baked-on Priming Coat of paint. Easy operation. Weather-tightness assured by continuous double contact around entire window. Windows open in. Six sizes in both 2-light and 3-light types. Furnished complete with all hardware. Steel frame screens also available.



TRUSCON COAL CHUTES

"Break-proof", weathertight and thief-proof. No castings used. Door and frame made entirely of heavy pressed steel. Truscon Coal Chutes are complete with positive spring latch, slotted hinges (to hold door open when desired) and formed lugs (to serve as anchors for cementing in masonry openings). Two sizes.

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LINE OF STEEL BUILDING PRODUCTS . . .

TRUSCON RESIDENTIAL STEEL CASEMENTS (Series 5) are available in 534 standard types and sizes, making it possible to meet practically every requirement for distinctive window designs and arrangements.

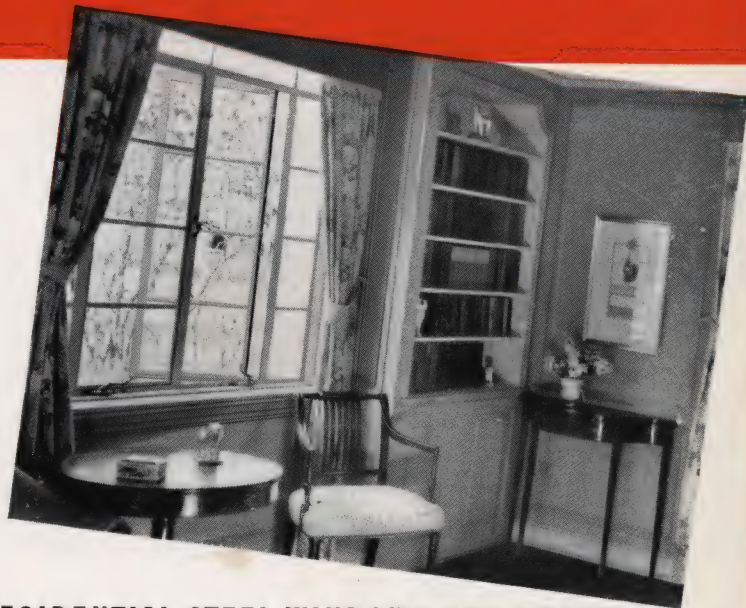
All **Truscon Steel Casements** incorporate the latest advantages of construction and easy operation. Bonderized and with baked-on priming coat of paint.

ROTO Types are equipped with underscreen operators of worm-drive type; and have concealed latch locking handles. Provisions are made for use of fixed screens. A stool gauge, attached to the sill member, insures proper location of the stool.

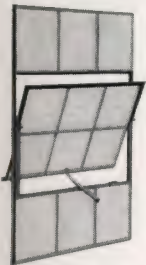
TEMPRYTE Insulating Windows are available for Truscon Casements, affording efficient ventilation under all weather conditions.

SIMPLEX Types of Truscon Steel Casements are provided with cam locking handles and friction type hinges to hold the window firmly in any open position. Wicket type screens are used with **SIMPLEX** Casements.

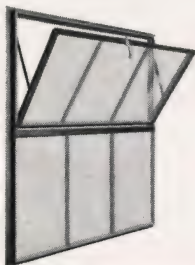
All Truscon Steel Casements are drilled near the top corners for attaching standard shade and drapery brackets. For complete details and scale drawings showing the many standard types of Truscon Residential Steel Casements, send for Catalog No. A-450.



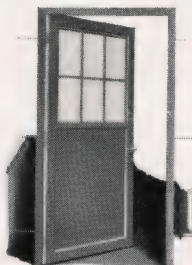
EXAMPLES OF TRUSCON'S COMPLETE LINE OF NON-RESIDENTIAL STEEL WINDOWS AND DOORS



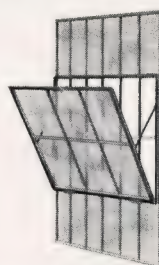
TRUSCON PIVOTED WINDOWS
Adaptable to all types of industrial and similar buildings. Easy to open and close. Available in a wide range of sizes.



TRUSCON UTILITY WINDOWS
Projected type. Popular for use in garages, shops, stores, basements, etc. Ventilator is the balanced projecting type.



TRUSCON INDUSTRIAL DOORS
Truscon Stock Type Steel Doors are built to withstand hard usage in factories, garages, service stations, etc.



SECURITY WINDOWS
Used in store buildings, warehouses and other types of buildings where adequate ventilation and protection are factors.



COMMERCIAL PROJECTED WINDOWS are used widely in buildings where appearance, shading and screening convenience and low cost are required of windows.

EXAMPLES OF TRUSCON'S COMPLETE LINE OF METAL LATHS AND ACCESSORIES



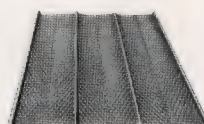
TRUSCON HERRINGBONE DOUBLE-MESH LATH
Designed for a perfect mechanical bond. Little plaster required. Sheets exceptionally rigid, permitting wider spacing of supports.



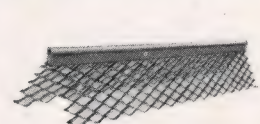
TRUSCON SMALL MESH DIAMOND LATH
Considered by many as the most practical type of diamond mesh lath on the market. Sheets trimmed exactly 8'-1" long.



TRUSCON HERRINGBONE RIGID LATH
Has same general advantages as Herringbone Double-Mesh excepting that mesh is larger. A popular, low-cost type.

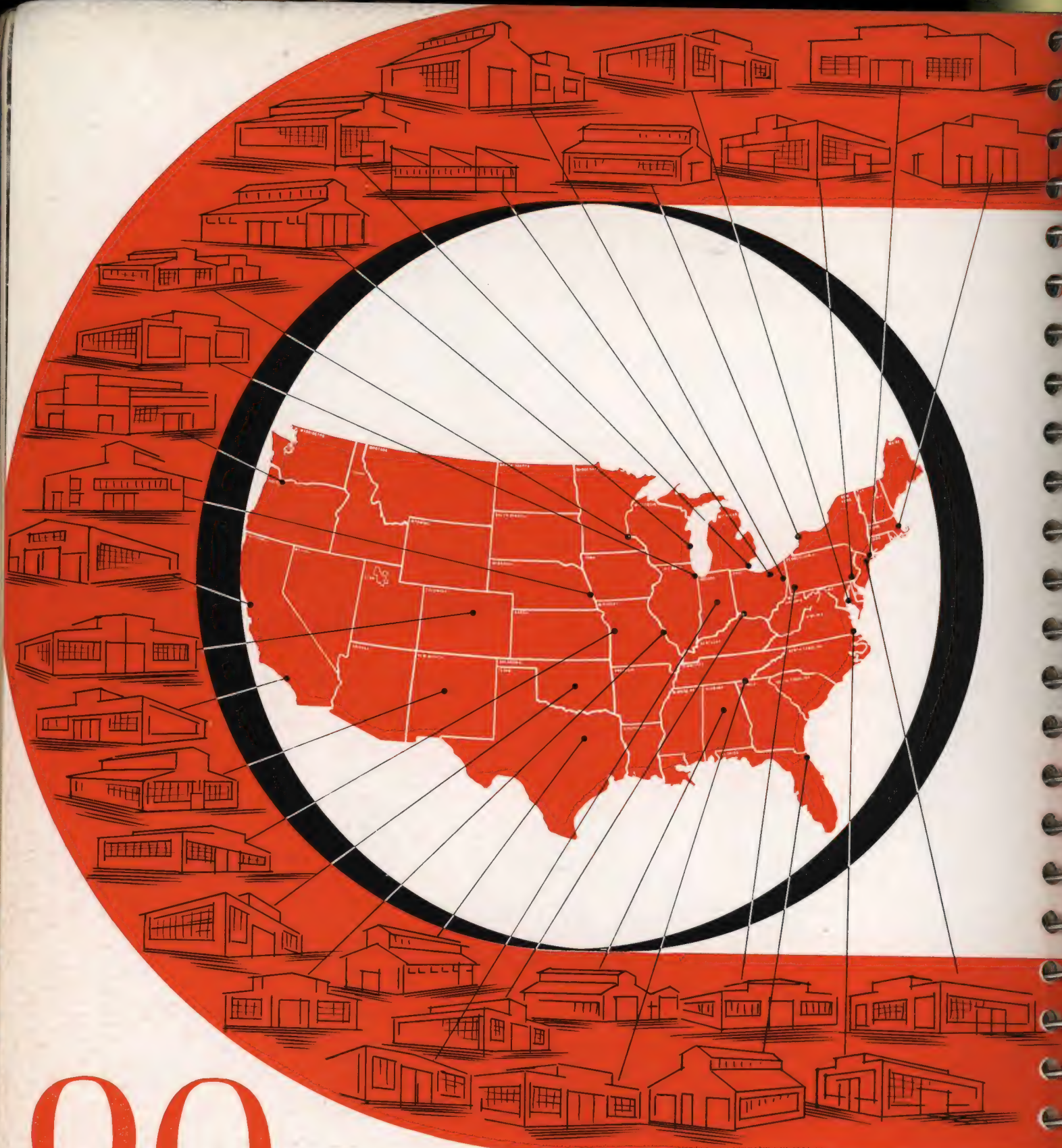


TRUSCON 3/8" DIAMOND RIB LATH
A self-furring lath with 3/8" deep ribs, permitting wide spacing between supports. Used principally as a base for ceilings, etc.



TRUSCON METAL LATH ACCESSORIES
Expanded corner bead illustrated. Every type of metal lath accessory available in the Truscon line. Send for catalog.

Steel Company



29

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TRUSCON STEEL COMPANY, YOUNGSTOWN, OHIO

BALSAM-WOOL

- HEAT INSULATION
- SOUND DEADENING

NU-WOOD

- INTERIOR FINISH
- LATH • SHEATHING
- ROOF INSULATION



WOOD CONVERSION COMPANY • SAINT PAUL, MINN.

BALSAM-WOOL

BALSAM-WOOL SEALED INTERIOR FINISH AND

BALSAM WOOL SEALED INSULATION

DESCRIPTION

Balsam-Wool is a flexible type of insulation. It is made from new wood fibres chemically treated to resist fire, rot, termites and vermin. The fibres are permanently processed into a fleecy mat which is manufactured to a controlled uniform density of 2.2 lbs. per cubic foot. Ninety-two percent of its volume is dead air. It is completely enclosed on both sides and edges with heavy, flexible, asphalt saturated and coated kraft liners. A lighter liner is used on the cold side.

Balsam-Wool is the practical equivalent of pure sheep's wool in insulation value. Its high efficiency is permanently assured by its exclusive sealed feature and its foolproof application method.

THERMAL CONDUCTIVITY

Balsam-Wool provides a high degree of resistance to the passage of heat. Tests made in laboratories show that the thermal conductivity of Balsam-Wool is as low as that of any other insulation used in building construction.

	Density	Mean Temperature	Conductivity	Resistance	Authority
Balsam-Wool	4.8 ¹	35	.25	4.00	Rowley
	3.62 ¹	70	.246	4.06	Peebles

¹Including asphalt coated kraft liners.

VAPOR RESISTANCE

The fibres of Balsam-Wool are water-proofed by a special treatment in the manufacture and individual fibres are made non-absorptive.

In addition, Balsam-Wool is double-sealed with a liner of tough, durable kraft, saturated and coated with asphalt to provide the utmost in moisture protection.

WINDPROOF

The durable kraft liners of Balsam-Wool are windproof. When the insulation is securely fastened in place at edges and ends, air does not pass through or around it.

FIRE RESISTANT

Balsam-Wool will not support combustion. The mat is chemically treated to resist fire. It will char while exposed to flame, but will not smolder or burn after the flame is removed.

PERMANENT

Balsam-Wool is designed to be moisture, fire, wind, vermin, termite and rot resistant. The mat consists principally of cellulose. When installed in wall, ceiling, or roof construction it cannot sag, settle, or disintegrate.



New Type Balsam-Wool Spacer Flange Fits Tightly Against Side of Stud—Is Fastened to Stud Face. Assures Air Spaces Front and Back

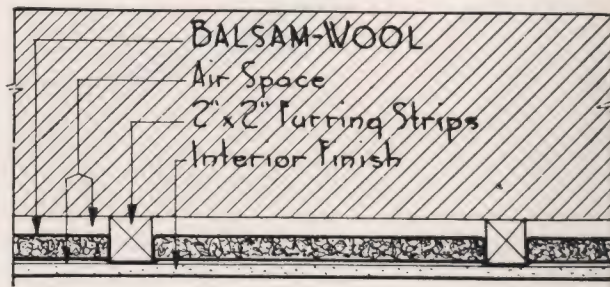
DENSITY, WIDTHS AND THICKNESSES

Density—Balsam-Wool Mat 2.2 lbs.
Thicknesses— $\frac{1}{2}$ in., 1 in., and Wall-Thick.
Widths—($\frac{1}{2}$ in., and 1 in.) 12, 16, 20, 24 and 33 in.
(Wall-Thick) 12, 16, 20, and 24 in.

LOW COST OF INSTALLATION

The five standard widths meet all average construction requirements. The carpenter cuts only to length. Turn-outs at ends are covered with Fibre Cleats furnished with the insulation and nailed to sills, plates or headers. Its flexibility makes it easy to fit into angles and around corners without waste. In its light, blanket form, it is easy and quickly installed.

BALSAM-WOOL APPLICATION DETAILS MASONRY WALLS

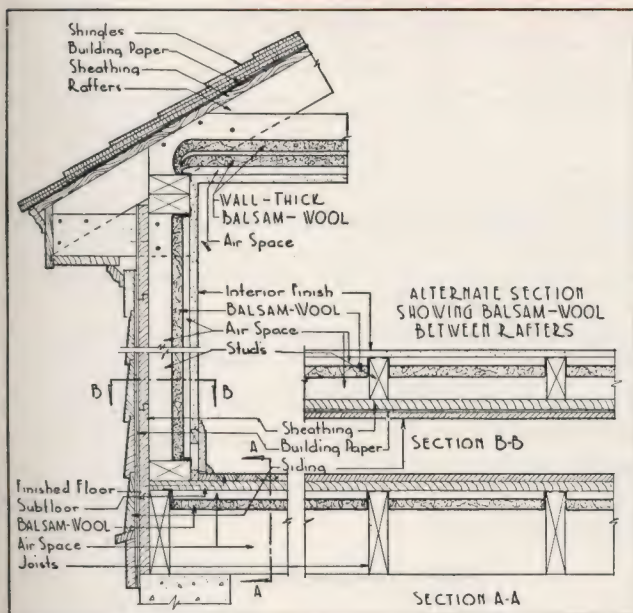


A special product, Balsam-Wool for Masonry Walls, is available for this construction.

Fur masonry walls vertically with 1 x 2 or 2 x 2 in. furring strips set 16 in. o.c., shimmed plumb and true and substantially secured. Apply continuous strips of Balsam-Wool between furring, with side flanges lapped over the face of the furring strips. Tack through flange for temporary fastening, until held permanently with solid plaster base or interior finish. Ends of insulation shall be fastened to sills, plates or headers with fibre channel furnished with the insulation. Where splicing of Balsam-Wool is necessary, ends shall be fastened to the face of the header cut between the furring strips.



BALSAM-WOOL APPLICATION DETAILS



Frame Walls, Ceilings, Floors and Roofs

SPECIFICATION DATA

Apply continuous strips of Balsam-Wool parallel with framing members, with the Spacer Flange* lapped over the inside edge or face of the members. Tack or staple through flange for temporary fastening until held permanently with plaster base, interior finish, or flooring. If the interior is not to be finished, apply wood strips over the edge of the framing and nail securely through flanges to form a continuous air-tight joint. Turnouts at ends shall be covered with the Fibre Cleat furnished with the insulation, and nailed to sills, plates, or headers. Remove a portion of the mat of Wall-Thick Balsam-Wool to make fastening at ends easier.

Where splicing of Balsam-Wool strips is necessary, ends shall be fastened as turnouts to a 2 x 4 inch header, cut between the framing members.

*Patent applied for.

BALSAM-WOOL FOR SOUND INSULATION

BALSAM-WOOL SOUND INSULATION SYSTEM

DESCRIPTION

The Balsam-Wool Sound Insulation System has been developed with three basic requirements in mind—1. Efficiency, 2. Ease of Application, 3. Economy. In adequately filling these requirements the system offers a practical method of sound deadening floors, walls or ceilings.

Efficiency: Tests show that the Balsam-Wool Sound Insulation System—installed over a typical floor construction (wood sub-floors, joists with metal lath and plaster on underside) results in a sound transmission reduction of 50 decibels.

Application: Only three things are necessary for the complete application of this system—Balsam-Wool, Wood Strips and Balsam-Wool Clips. The Balsam-Wool is first placed over the area to be insulated, acting as an efficient stop or absorption agent against noise that would ordinarily pass through the wall, floor or ceiling. Balsam-Wool performs this sound insulation function in two manners—by absorption and reflection. The insulating mat absorbs the major portion of transmitted sound. The two heavy asphalt coated liners reflect sound.

The Clips hold the sleepers (to which the finished floor is nailed) securely in position over the cushion of Balsam-Wool. No movement or creeping is allowed in the horizontal direction while sufficient free-action is allowed vertically to give the finished floor resiliency.

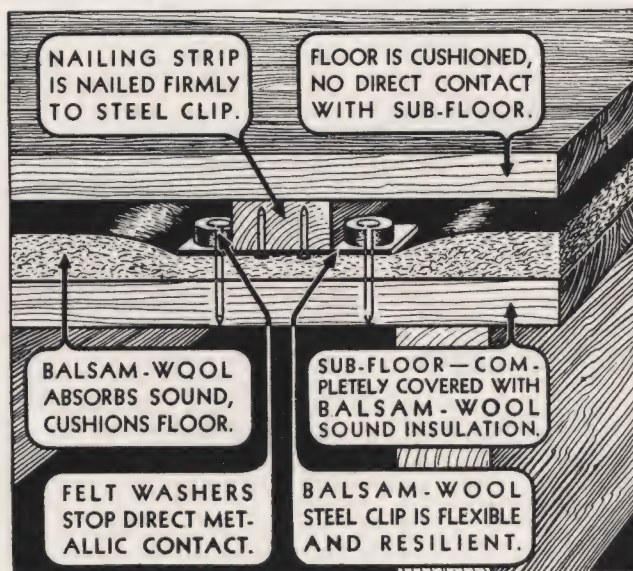
The Balsam-Wool Clip is nailed to the underside of the sleeper at right angles as shown in the drawing on this page. It will be noticed that the design of the clip allows spring action which permits vertical movement of the floor. The felt pad which fits over the nail which is driven into the sub-floor prevents any direct metallic contact between nail and clip. See drawing.

Economy: The simplicity of the system itself—the standard product used and the complete ease of application result in an obviously economical as well as highly efficient job. No

special mechanics are required—no special tools. While mechanics should not be careless, there is nothing exacting about the application. Consequently, considerable speed is possible.

Advantages

As the finished floor and sleepers are not nailed directly to sub-floor, one of the common causes for floor squeaks is eliminated. The moving load on floors places no tension on nails.



Balsam-Wool Sound Insulation System
Frame Construction

NU-WOOD INTERIOR FINISH

GENERAL DESCRIPTION

Nu-Wood is processed wood. Clean, new wood is separated into individual fibres which are assembled under pressure to form an insulating board of many uses. This board is used as Nu-Wood Insulating Interior Finish, Nu-Wood Board, Nu-Wood Insulating Lath, Nu-Wood Insulating Sheathing and other Nu-Wood products.

Nu-Wood Interior Finish is installed over framing, furring, or continuous surfaces in new or old construction to take the place of lath and plaster, or over wall and ceiling surfaces of plaster, masonry, or wood in old construction. It needs no painting or decorating. The soft shades and interesting surface texture give Nu-Wood rooms unusual decorative effects. Yet Nu-Wood does more than decorate, it insulates against heat and cold. It hushes noises. It does all these things in one operation.

Nu-Wood Interior Finish is furnished in several color selections and in a variety of sizes. Each unit is provided with edges which experience has shown to be the best suited for carefully designed interior finish application.

Nu-Wood fulfills all the requirements of Federal Specifications LLL-F-321a Insulating Fibre Board. In order to meet these specifications the product must have certain qualities with respect to conductivity, transverse strength, deflection, tensile strength, linear expansion, and water absorption.

THERMAL CONDUCTIVITY

The thermal conductivity as determined by Professor J. C. Peebles, Armour Institute of Technology, expressed in B.t.u. per hour per sq. ft. per degree difference in temperature per inch of thickness is .324 at a mean temperature of 72 degrees F.

SOUND ABSORPTION

Tests by the U. S. Bureau of Standards on Nu-Wood applied directly to a plastered surface have established the following sound absorption coefficients:

Table 1—Sound Absorption

Frequency	128	256	512	1024	2048	4096	Noise Reduction Coefficient†
½" Nu-Wood*	.12	.19	.30	.40	.40	.51	.30
1" Nu-Wood*	.14	.19	.37	.37	.41	.56	.35

†The noise reduction coefficient given in the table is the average to the nearest multiple of .05 of the coefficients for 256, 512, 1024, and 2048 cycles.

*Nu-Wood Sta-Lite has a sound absorption coefficient of approximately .20 at a frequency of 512 cycles.

When applied to furring strips, an increase in sound absorption efficiency will result.

LIGHT REFLECTION

Light reflection tests have been made with average results reported as follows:

Table 2—Light Reflection

Color	Reflection Factor
Sta-Lite	74%
Tan	40%
Variegated	38%

IDENTIFICATION—COLOR TREATMENT

The colors and surface treatment in which Nu-Wood Interior Finish is available may be described as follows:

Sta-Lite: Color is white with a mat finish. This new product retains the desirable texture of Nu-Wood offering extremely high light reflection value plus a surface which actually lightens with exposure.

Tan: A neutral shade much the color of dry sand.

Variegated: The name applied to an assortment of colors in which Nu-Wood Tile and Plank are furnished. The colors consist of various shades of rich tan with a slight peach tint. Each package of Variegated units contains a complete assortment of shades, which when applied, blend harmoniously with each other. Each unit has a distinct uniform color. The shades of Variegated are not furnished individually.

NU-WOOD INTERIOR FINISH PRODUCTS

NU-WOOD BOARD

Description: Square edge structural board available in Tan, Ivory, or Sta-Lite, all of which colors harmonize with any scheme of decoration. One side has an attractive texture—the other a smooth screen finish.

Uses: Nu-Wood Board is used as interior finish on walls and ceilings in both old and new construction. Joints may be handled by beveling and butting the edges, see V-slice cut Fig. 10, page 8, or with overlays of Kolor-Trim Molding, Nu-Wood, wood or metal moldings, see Fig. 11, page

8, and Fig. 12, page 8. In addition to its uses as interior finish, Nu-Wood Board has many other uses in construction where an insulating material having structural strength is desired—in summer cottages, farm buildings, temporary buildings, etc.

Thicknesses and Sizes: Full ½ inch thick. Thicknesses up to 2 inches in multiples of ½ in. are available. Sizes are 4 feet wide by 4, 5, 6, 7, 8, *8½, 9, 9½, 10, and 12 feet long.

*These sizes not carried in stock, but can be furnished.

NU-WOOD INTERIOR FINISH PRODUCTS

NU-WOOD KOLOR-FAST TILE

Description: Rectangular tile units with attractive textured surface are available in Tan, and Variegated colors. All four edges are provided with tongue and groove joints, see Fig. 1.



Fig. 1. Kolor-Fast Tile Joint



Kolor-Fast Plank Joint

Uses: Laid in various patterns and in combinations with other units of Nu-Wood Interior Finish such as Nu-Wood Board, Plank, Wainscot and Kolor-Trim.

Thicknesses and Sizes: Full ½ inch and 1 inch thick. Sizes are *8x8, *8x16, 12x12, 12x24, 16x16, 16x32, *18x48, 24x24, and 24 inches x 48 inches.

NU-WOOD KOLOR-FAST PLANK

Description: Plank units in various widths and lengths with attractive textured surfaces are available in Tan and Variegated colors. Long edges are furnished with tongue and groove joints, see Fig. 2.

Uses: Particularly well adapted for wall treatment with or without Nu-Wood Wainscot and as ceiling treatment between beams and over other areas where lengths can be limited to 12 feet or less.

Thicknesses and Sizes: Full ½ inch and 1 inch thick. Widths are 8, 10, 12, and 16 inches. Lengths are 6, 8, 9, 10 and 12 feet. Each width and length is packaged individually.

NU-WOOD STA-LITE TILE AND PLANK

Description: Rectangular tile units and plank units in various widths and lengths with attractive textured surface, having an extremely high light reflection value—a surface which actually grows lighter with exposure. Pre-decorated—easily cleaned with rubber sponge or cloth. If special color is desired, surface acts as primer—paint coverage is excellent.

Edges of Sta-Lite Tile and Plank are provided with a tongue and groove joint as show in Fig. 2.



Fig. 2. Sta-Lite Tile Joint



Sta-Lite Plank Joint

Use: Sta-Lite is especially designed for use in homes, theatres, stores, offices, schools, libraries, and wherever decoration, insulation, noise reduction, high light reflection, and color permanence at low cost are desired.

Thicknesses and Sizes: Sta-Lite Tile and Plank are available in the same thicknesses and sizes as Bevel-lap Tile and Plank which are shown above.

NU-WOOD WAINSCOT

Description: Same composition as other Nu-Wood units except surface has a specially treated hard finish. Color is light mahogany brown, texture is non-repetitive and has a distinctive effect simulating weathered wood. Side edges have ship-lap joints, see Fig. 3. Ends are square cut.



Fig. 3. Cross Section Through Wainscot Joint

Uses: Because of the hard surface, this product is particularly well adapted for lower wall areas and for walls subject to abuse.

Thicknesses and Sizes: Full ½ inch thick. Available in 2 and 4 foot widths and in 3, 4, and 5 foot heights.

KOLOR-TRIM MOLDINGS

Description: Kolor-Trim pre-decorated wood moldings are designed to bring out the full beauty and color harmony of Nu-Wood Interior Finish. Made of Ponderosa Pine, these moldings are finished in a semi-gloss enamel in three designs. Pattern No. 1 Reversible Cove, No. 2 Chair Rail, No. 4 Bead, in a variety of colors.

Uses: Kolor-Trim has many uses. For design suggestions see Fig. 5, page 7. Cove molding is reversible and is finished in the same color on both sides. Cove can be applied at the intersection of walls and ceiling, as inside and outside corner treatment, and in many other applications where a large molding of either convex or concave shape is desirable.

Chair Rail is used as a chair rail at the joint between Nu-Wood Wainscot and upper wall treatment, as base-board, and for window and door casings.

Bead is used principally as a joint treatment. It may be applied directly to the surface of Nu-Wood or as a shadow joint treatment in which the edges of the Nu-Wood Board are recessed, see Fig. 12, page 8. Bead may be used to decorate and protect inside and outside corners, see Fig. 6. When several Kolor-Trim Bead moldings are grouped to form a chair rail or other decoration, interesting color combinations can be produced.

Table 3—Kolor-Trim Moldings

Description	Pattern	Size	Colors
Kolor-Trim Cove Molding, painted both sides. Reversible.	No. 1	2" x 2"	No. 10 Tan No. 20 Green No. 30 Ivory
Kolor-Trim Chair Rail Molding	No. 2	5/8" x 2 3/4"	No. 10 Tan No. 20 Green No. 30 Ivory No. 40 Brown
Kolor-Trim Bead Molding	No. 4	1/4" x 3/4"	No. 10 Tan No. 20 Green No. 30 Ivory No. 50 Vermillion No. 60 Gold

*These sizes not carried in stock, but can be furnished.

NU-WOOD INTERIOR FINISH PRODUCTS

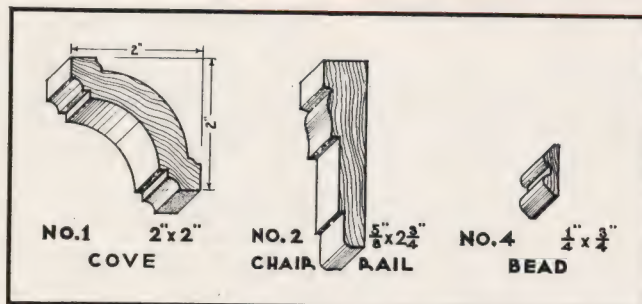


Fig. 4. Kolor Trim Moldings

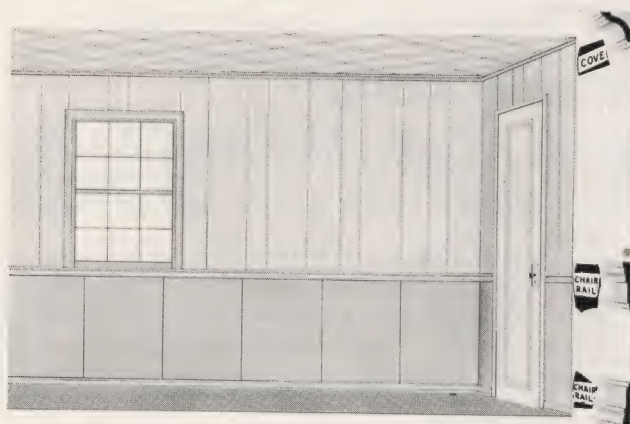


Fig. 5. Design Suggestion, Using Kolor-Trim Moldings

Application Suggestions: Since Kolor-Trim Moldings are pre-decorated, mechanics should handle them with clean hands—avoiding rubbing and scuffing. Moldings should be applied with finish nails or casing nails, driven in grooves or offsets where they will be least noticeable. Heads should be set slightly below surface. Material is furnished with Kolor-Trim for touching up nail heads and cut ends. Kolor-Trim Enamel, for use in painting other surfaces to match, may be obtained from Nu-Wood dealers.

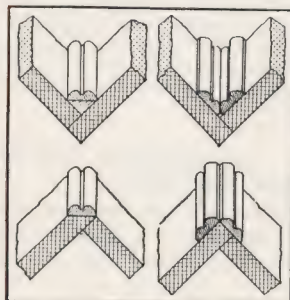


Fig. 6. Corner Treatments with Kolor-Trim Beads

NU-WOOD ORNAMENTS AND FRIEZES

Description: Specially designed ornaments and friezes to be used in combination with other Nu-Wood Interior Finish units are furnished in ornamental tile with beveled square edges (D-14, D-7 and D-8), rosettes (A-1, V and G), corner pieces (21, 23 and 22), and friezes (1, 2, 3, 4 and 5). For thickness and sizes see Fig. 7. The frieze designs are 1/2 in. x 3 in. x 32 in.

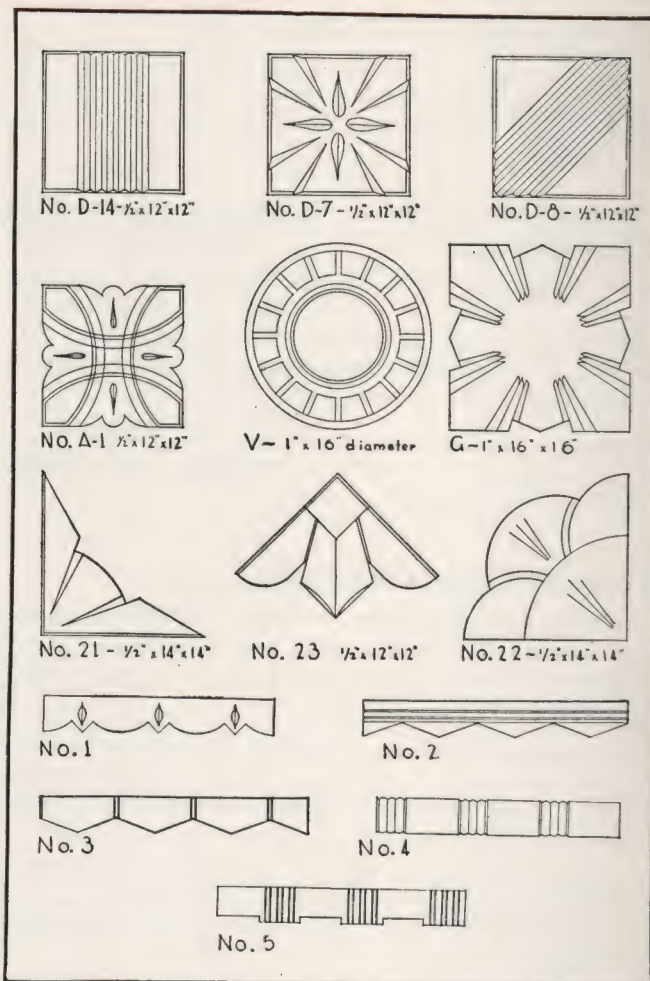


Fig. 7. Nu-Wood Ornaments and Friezes

NU-WOOD MOLDINGS

Description: Nu-Wood Moldings are accurately fabricated from Nu-Wood board and are furnished in Tan color. Exposed surfaces are smooth finish.

Thickness and Size: Full 7/8 inch thick, unless otherwise noted—all 8 feet long, see Fig. 8.

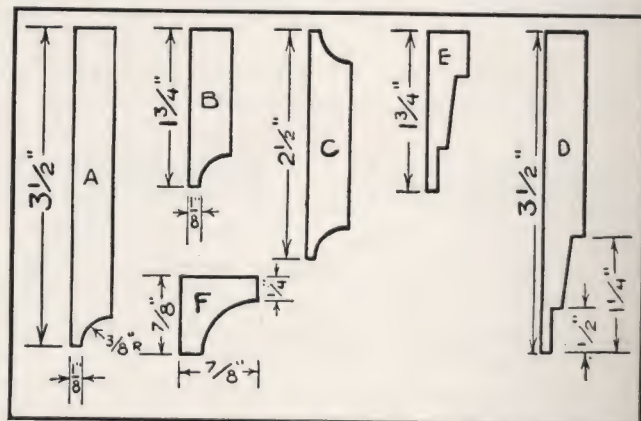


Fig. 8. Nu-Wood Moldings

NU-WOOD INTERIOR FINISH PRODUCTS

GROOVING AND BEVELING TOOLS

Nu-Wood Board can be cut with an ordinary saw or it can be cut and grooved in interesting designs and molding treatments made on the job by carpenters with the aid

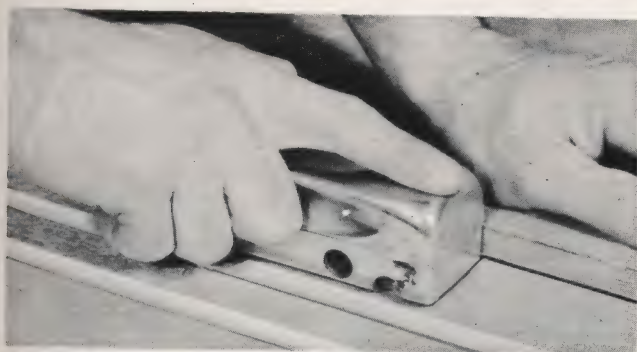


Fig. 9. Grooving Nu-Wood Board with Bevil-Devil

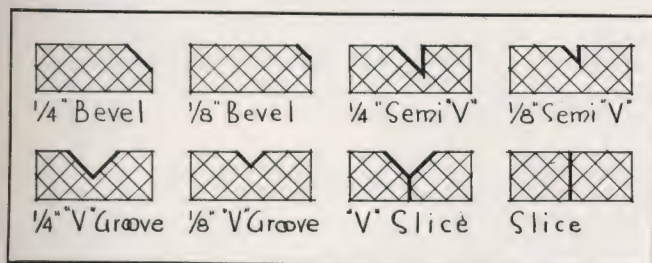


Fig. 10. Typical Bevil-Devil Cuts

of beveling planes made for this purpose. One such plane is the Bevil-Devil, Fig. 9, and typical cuts are shown in

Fig. 10. A special tool, Bevil-Devil No. 101 is also available. It is designed specifically for rabbeting or recessing the edge of Nu-Wood Board to receive Kolor-Trim Bead as a joint treatment—see Fig. 12. The square or beveled recessed cuts, as shown in Fig. 12, can be made at a depth of $\frac{1}{8}$ inch, $\frac{3}{16}$ inch or $\frac{1}{4}$ inch in one operation. Bevil-Devil tools can be obtained from Nu-Wood dealers.

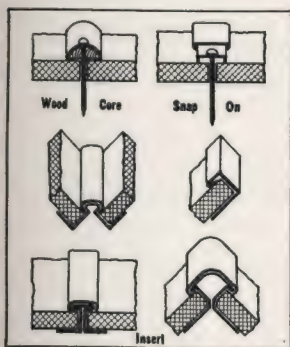


Fig. 11. Three Types of Metal Moldings

ADHESIVE

Adhestik, a special adhesive, is recommended for applying Nu-Wood Interior Finish. Covering capacity is approximately 80 square feet per gallon. It is available from Nu-Wood dealers in one and five gallon cans.

METAL MOLDINGS

Metal moldings, furnished by several manufacturers, offer a modern decorative trim. They are used extensively for

protection at openings and corners, as well as to create modernistic designs for entire wall and ceiling surfaces.

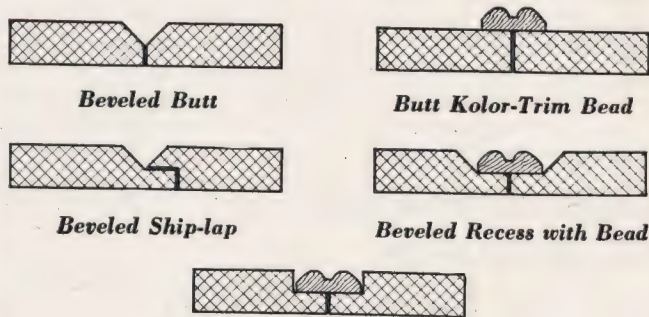


Fig. 12. Nu-Wood Board Treatments

In general, metal moldings are of three types: (1) wood core, (2) snap-on, (3) insert, see Fig. 11.

These moldings are made of chromium plated metal, stainless steel, solid aluminum, brass, copper and bronze. Bright mirror or satin velvet finish may be had on most metals.

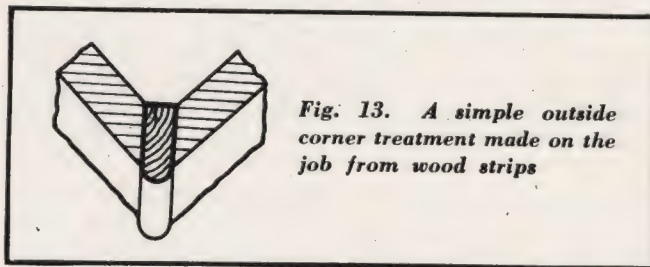


Fig. 13. A simple outside corner treatment made on the job from wood strips



DIRECTIONS FOR APPLYING NU-WOOD INTERIOR FINISH

No. 1—APPLICATION TO CONTINUOUS SURFACES

Nu-Wood Interior Finish may be applied to continuous surfaces such as plaster, Nu-Wood Insulating Board, Semi Tuff-Wood, plasterboard, plywood, wood sheathing, masonry, etc., with brads or nails (providing the backing surface is a good nailing base), or with a special adhesive known as Adhestik or a combination of Adhestik and supplementary bradding.

APPLICATION WITH NAILS

Preparation of Surface

The surface to which Nu-Wood is to be applied with nails must provide a secure anchorage and must be solid and true. If the surface is not solid or if it is not a satisfactory nailing base such as metal ceiling, thin wallboard, masonry, unsound plaster, etc., see Application to Framing or Furring, page 11, or Application with Adhesive at bottom of this page.

Application

Tile and Plank: Galvanized wire brads are recommended. In general, 1¼ inch No. 17 brads are recommended for ½ inch Nu-Wood; 1¾ inch for No. 15 or No. 16 brads for 1 inch Nu-Wood. Approximately 4 pounds of 1¼ inch brads are required per thousand square feet of Nu-Wood. Brads of other lengths may in some instances be more desirable, depending on the hardness, rigidity or thickness of the nailing base. Shorter brads, for instance, may be better suited for hard plaster.

The number and position of brads required for the various size Tile are given in Table 4. When nailing Plank, space the brads approximately 6 inches apart at the long edges. Occasional bradding at the center of 12 and 16 inch width plank is desirable.

Nail through the surface of the Tile or Plank. Drive nails at an angle to the surface—reverse the angle of half the nails. Set nail heads below surface with properly gauged hammer blow or with nail set.

Note: *Sta-Lite Tile and Plank which have a tongue and groove joint may be blind nailed in the beveled edges. Sta-Lite Plank may also be nailed in the bead. In some sizes of tile it will be necessary to provide additional support with surface nailing.*

Wainscot and Board: If nails are to be exposed, use brads and follow instructions for Tile and Plank. Nails should be spaced from 4 to 6 inches around the edges of the unit and every 10 to 12 inches apart over the remaining area. Start nailing at the center and work toward edges. If nails are to be covered with Kolor-Trim Moldings, surface coating or other treatment, ordinary nails with heads may be used. In these instances 1¼ inch coated or bright box nails or galvanized (small head) shingle nails are recommended for ½ inch Nu-Wood; 1¾ inch length for 1 inch Nu-Wood.

APPLICATION WITH ADHESIVE

Preparation of Surface

The surface to which Nu-Wood is to be applied with Ad-

Table 4—Nailing Nu-Wood Tile

Tile Size	Location of brad	No. of brads per tile	Approx. lbs. of brads per 1,000 sq. ft. tile
* 6 x 12	1 each corner	4	7
12 x 12	1 each corner	4	3 ½
12 x 24	4 each long edge	8	3 ½
* 8 x 8	1 each corner	4	7 ½
* 8 x 16	3 each long edge	6	4
16 x 16	3 on two opposite edges 3 on center line	9	4
16 x 32	5 each long edge 5 on center line	15	3 ½
*16 x 48	7 each long edge 7 on center line	21	3 ½
24 x 24	4 on two opposite edges 4 on center line	12	2 ½
24 x 48	7 each long edge 7 on center line	21	2 ½

*These sizes not carried in stock, but can be furnished.

Adhestik should be solid, clean and true, free from dirt, grit or other impurities. Whitewash, calcimine or wall paper should be completely removed and paint or varnish surfaces should be thoroughly scratched to insure intimate contact between the adhesive and the base. If the surface is greasy, it must be washed clean with proper solvent.

Over Plaster: Plaster surfaces must be sound. Loose or chalky spots should be patched as required. If plaster is badly cracked or broken, wood furring strips should be installed to furnish solid base, see Application to Framing or Furring, page 11. Surfaces of rough or sand finish should be scraped to remove loose particles.

When new plaster forms the base for Nu-Wood, it is often feasible to omit the putty or finish coat. In such cases, the brown coat must be troweled to a uniform, smooth surface and applied to give a total minimum plaster thickness of ½ inch. Ample time must be given for plaster to dry and reach its full strength before Nu-Wood is applied. Gypsum plaster is recommended.

It is advisable to test the Adhestik by first applying two or three units as described above. Then carefully pull them off to note the bonding quality between the base and the Adhestik and between the Nu-Wood and the Adhestik. If directions are followed carefully the Adhestik itself will separate, leaving part on the base and part on the Nu-Wood.

After Tile and Plank units have been placed in final position supplementary nailing may be desirable, in which case drive brads at an angle through the surface of Tile directly over the spot or ridge of Adhestik, and set heads below Nu-Wood surface. Supplementary nailing should be used in applying Nu-Wood Wainscot and Board.

(Continued—See Page 10)



DIRECTIONS FOR APPLYING NU-WOOD INTERIOR FINISH

Over Masonry or Concrete: Since Masonry or concrete surfaces are usually uneven it is not desirable to apply large units of interior finish with adhestik. Nu-Wood Tile should not exceed 12 x 12 inch size. Nu-Wood Board, Plank and Wainscot should not be applied directly to such surfaces unless supplementary nailing is possible. If base is not satisfactory for nailing see Application to Framing or Furring, page 11.

Other Continuous Surfaces: Nu-Wood Interior Finish can be applied to other continuous surfaces such as Nu-Wood Insulating Board, Semi Tuff-Wood, plasterboard, plywood and wood sheathing. Follow manufacturers recommendation for nailing the base and spacing of framing members.



Fig. 14. Applying Adhestik

Spreading Adhestik

Always apply Adhestik to Nu-Wood—not to the base. With a putty knife work a small amount of Adhestik into the Nu-Wood as a priming coat where dabs or ridges are to be located. This priming assures perfect adhesion between Adhestik and the Nu-Wood. Do not spread Adhestik on Nu-Wood in a thin layer—each dab or ridge must have bulk.

Tile: Apply Adhestik in spots or dabs approximately 2 inches in diameter and $\frac{1}{4}$ inch to $\frac{1}{2}$ inch thick, Fig. 14. The exact size and number of dabs are varied with the condition of the surface and the size of the Tile, see Table 5. These dabs should be in the corners of the Tile, along the sides, and over the remaining area. The outside edge of the Adhestik should be kept $1\frac{1}{2}$ inches away from the edge of the Tile.

Plank: Apply Adhestik in narrow ridges approximately 1 inch wide and $\frac{3}{8}$ inch thick. On Plank up to and including 12 inches, place two ridges of Adhestik parallel with length of the unit, $1\frac{1}{2}$ inches from edge. The 16 inch unit should have an additional ridge in the center. Exact size and spacing of ridges will vary with the condition of the surface and the size of the Plank.

Wainscot and Board: Apply Adhestik in narrow ridges approximately 1 inch wide and $\frac{3}{8}$ inch thick. Ridges should be approximately 10 to 12 inches apart. The exact size and spacing of ridges will vary with the condition of surface and size of Wainscot or Board unit.

Application

After dabs of Adhestik have been applied, place Nu-Wood in its approximate final position, Fig. 15. Slide back and forth for a distance of about $\frac{3}{4}$ inch under uniform pres-

Table 5—Applying Nu-Wood Tile with Adhestik

Tile Size	No. Spots Per Tile	Sq. Ft. Per Gal.	Gal. Per 1,000 Sq. Ft.
* 6 x 12	4	38	26
12 x 12	4	77	13
12 x 24	6	77	13
* 8 x 8	4	34	29
* 8 x 16	4	69	15
16 x 16	4	100	10
16 x 32	6	134	8
* 16 x 48	8	154	7
24 x 24	9	103	10
24 x 48	12	154	7

*These sizes not carried in stock, but can be furnished.

sure of the hands to obtain good contact. If the surface of the unit is below the level of adjoining pieces, do not pull the unit away from the base to bring surface level but remove it and add more Adhestik. Again work into position as described above to obtain correct surface level. When applying Nu-Wood units be sure that the Adhestik actually "wets" both Nu-Wood and backing surface. Brad or shore the first units on either walls or ceilings to prevent sliding out of position during application of surrounding units. Do not bend Nu-Wood units over high spots. The tendency of the unit to straighten may break the Adhestik bond.



Fig. 15. Applying Tile with Adhestik

APPLICATION TO CURVED SURFACES

When applying Nu-Wood Tile, Plank or Board to curved surfaces it may be necessary, depending on the radius of the curve, to kerf the back of the unit with a saw or beveling tool cut. The amount of kerfing and depth will depend upon the radius of the curve and should be determined by test on the job. Best practice is to nail or to use Adhestik and supplementary nailing on curved surfaces.

(Continued—See Page 11)

DIRECTIONS FOR APPLYING NU-WOOD INTERIOR FINISH

No. 2—APPLICATION TO FRAMING OR FURRING

PREPARATION OF SURFACE

Nu-Wood can be applied in new and old construction to furring strips (in some cases to framing members) or to continuous surfaces such as plaster, Nu-Wood Board, Semi Tuff-Wood, plasterboard, plywood, wood sheathing, etc., which can be applied over the framing. For instructions covering the latter, see Application to Continuous Surfaces, page 9.

Where the existing wall or ceiling surface is not a satisfactory base for direct application—such as badly cracked or broken plaster, metal ceilings or thin wallboards—furring strip should be used as a base for nailing Nu-Wood. Even in new construction, furring strips are often required to give a level base and the necessary support for the application of smaller units of Nu-Wood Interior Finish.

Furring Strips: Furring strips, 1 x 2 inches, 1 x 3 inches, or 2 x 2 inches, should be cut from straight lumber of uniform thickness. Nail the strips securely to framing or directly over the surface to be covered and shim to a true level plane.

Nailing: Galvanized wire brade are recommended. In general 1 1/4 inch, No. 17 brads are recommended for 1/2 inch Nu-Wood; 1 3/4 inch, No. 15 or 16 for 1 inch Nu-Wood. Approximately 4 to 5 pounds of 1 1/4 inch brads are required per thousand square feet of Nu-Wood. Brads of other lengths may, in some instances, be more desirable depending on the hardness, rigidity or thickness of the nailing base.

Nail through the surface of the Tile or Plank. Drive nails at angle to surface—reverse the angle of half the nails. Set nail heads below the surface with properly gauged hammer blow or with nail set. *For blind nailing, see "note", page 9.*

APPLICATION

Tile: Nu-Wood Tile should not be applied directly to framing members. In general, application should be made to furring strips or to a continuous backing.

Install furring strips at right angles or diagonally to the direction of the framing members, depending upon the design of the Tile pattern. Place furring strips in one direction, parallel to the edges of Tile at a maximum spacing of 12 inches o.c. If Tile is oblong, place parallel with long edges. Place furring so it will support the Tile unit continuously at two opposite edges, Fig. 16. The number and position of brads required for the various size Nu-Wood are given in Table 4, page 9.

Plank: Nu-Wood Plank should not be applied directly to framing members. In general, application should be made to furring strips or to a continuous backing.

Install wood nailing or furring strips at right angles to the direction in which the Nu-Wood Plank is applied. Place the strips 8 to 12 inches o.c. Space brads from 8 to 12 inches apart at long edges of Plank unit, depending

on the spacing of the furring strips. Occasional bradding at the center of 12 and 16 inch Plank is desirable.

Wainscot: Nu-Wood Wainscot may be attached directly to framing or furring spaced 12 to 16 inches o.c. Insert headers or furring strips back of chair rail, baseboard, and at joints between adjacent pieces of wainscot. Provide additional support either vertically or horizontally as required, spaced not over 16 inches o.c.

If the nails used in applying Nu-Wood Wainscot are to be exposed, use brads and follow instructions for Tile and Plank. Nails should be spaced 4 to 6 inches apart around edges of unit and 10 to 12 inches apart at each intermediate framing or furring member. Begin nailing at center and work toward edges. If nails are to be covered with Kolor-Trim Molding or other treatment, ordinary nails with heads can be used. In this instance, 1 1/4 inch coated or bright box nails or galvanized (small head) shingle nails are recommended for 1/2 inch Nu-Wood; 1 3/4 inch length for 1 inch Nu-Wood.



Fig. 16. Applying Tile to Furring Strips

Board: Nu-Wood Board may be attached directly to framing or furring spaced 12 to 16 inches o.c. On lower portion of wall insert header or furring strips at chair rail height, back or baseboard, and at intervals between chair rail and baseboard as required. Provide support at all edges of each Nu-Wood unit.

If the nails used in applying Nu-Wood Board are to be exposed, use brads and follow instructions for Tile and Plank. Nails should be spaced 4 to 6 inches apart around edges of unit and 10 to 12 inches apart at each intermediate framing or furring member. Begin nailing at center and work toward edges. If nails are to be covered with Kolor-Trim Molding or other treatment, ordinary nails with heads can be used. In this instance, 1 1/4 inch coated or bright box nails or galvanized (small head) shingle nails are recommended for 1/2 inch Nu-Wood; 1 3/4 inch length for 1 inch Nu-Wood.

PAINTING, DECORATING AND CLEANING NU-WOOD

The natural color and texture of Nu-Wood Interior Finish provides a pleasing appearance without decorative treatment. However, if other effects are desirable, Nu-Wood can be treated as easily as any plaster or wood surface. The proper preparation of the Nu-Wood surface and application of the finish are essential, therefore the following suggestions are offered:

APPLICATION OF OIL OR VARNISH PAINTS

To secure maximum coverage, it is advisable to size or seal the natural surface of Nu-Wood before oil or varnish paints are applied. Application of the size and finish coat (or coats) should be in accordance with paint manufacturer's specifications. If complete coverage with one size coat and one finish coat is required, the size coat

(Continued—See page 12)

PAINTING, DECORATING AND CLEANING NU-WOOD

should be tinted with a portion of the finish coat or with colors to the desired shade. In this case, the size should be of the prepared oil or varnish type rather than the water base type.

After the Nu-Wood surface has been properly sized, any high grade flat, eggshell, semi-gloss or glossy paint may be applied.

APPLICATION OF CASEIN PAINTS

Paints of this type are furnished in concentrated paste or powder form and are usually thinned with water. They should be applied directly to unsized Nu-Wood and with careful application one coat is usually satisfactory. Two coats, however, are recommended for best results. These paints are considered washable to a certain degree—that is, they may be cleaned by washing with lukewarm water.

For additional information on decorating Nu-Wood see Nu-Wood Application Book

NU-WOOD INSULATING SHEATHING SPECIFICATIONS

DESCRIPTION

Nu-Wood Sheathing is made from Nu-Wood Board processed to meet requirements of a covering material for outside walls. Surfaces and all edges are treated with a special waterproofing agent to seal against moisture and vapor penetration.

Nu-Wood Sheathing is made in two types, both of which are $\frac{3}{4}$ inches thick. Standard Nu-Wood Sheathing has square edges, is 4 feet wide and 7, 8, $8\frac{1}{2}$, 9, $9\frac{1}{2}$, 10 and 12 feet long. Shiplap Nu-Wood Sheathing is 2 feet wide and 8 feet long. The ends of each board are square cut and the long edges have a special shiplap joint.

The thermal conductivity of Nu-Wood, expressed in B.t.u. per hour per square foot per inch of thickness per degree difference in temperature, is .324. Therefore Nu-Wood Sheathing in the $\frac{3}{4}$ in. thickness has a conductance of .415.

APPLICATION—STANDARD NU-WOOD SHEATHING: Apply Nu-Wood Sheathing with the length parallel with the framing members. Apply with exposed face showing markings for nails. Where possible, apply boards of sufficient length to span between sills or plates or other structural members. Center Nu-Wood Sheathing on framing, leaving a space of approximately $\frac{1}{8}$ inch between boards around all edges. At window and door frames, bring Nu-Wood Sheathing in close contact with frames.

Construction framing to receive Nu-Wood Sheathing shall be spaced accurately 12 inches or 16 inches on centers. Follow the standard recommendations of the U. S. Department of Commerce and the National Lumber Manufacturers Association for all framing. Insert 2 x 4 inch headers to provide bearing for all end joints when not otherwise supported by sills or plates since all edges must be supported.

Nailing: Nail Nu-Wood Sheathing to intermediate framing members first, then around all edges. Use 8d common nails or two inch galvanized roofing nails with $\frac{3}{8}$ inch or $\frac{1}{2}$ inch head. Space nails 6 inches apart on intermediate framing. Space edge nails 3 inches apart and $\frac{3}{8}$ inch in from edges. Drive nail head flush with surface of board. Proper spacing of nails is indicated by marking on the surface of Nu-Wood Sheathing.

Wood Siding: Apply wood siding directly over Nu-Wood Sheathing, butting joints in siding on center of studs. Nail siding at framing members only with nails of sufficient length to penetrate the framing at least 1 inch.

Shingles: Install 1 x 2 wood furring strips over Nu-Wood Sheathing placed at right angles to framing and spaced properly to receive shingles. Nail the wood furring at framing members only with nails of sufficient length to penetrate the framing at least 1 inch.

Stucco: It is desirable to cover Nu-Wood Sheathing with building paper. Then apply self-furring wire or metal lath, nailed through to framing members, with nails of

mild soap and a soft sponge. Strong cleaning powders should be avoided. Several of the manufacturers claim that their products do not reduce the sound absorption of Nu-Wood appreciably. For the most part, these statements are based on their experience, since few actual laboratory tests are available.

CLEANING NU-WOOD

The ordinary accumulation of dust and dirt can be easily removed from Nu-Wood Interior Finish by brushing the surface lightly with a whiskbroom or by wiping with a dry, clean, untreated rubber sponge, or a combination of both. On large jobs it is advisable to have several sponges on hand so that those not in use can be washed occasionally and thoroughly dried.

sufficient length to penetrate framing at least 1 inch. If non-furring lath is used, apply 1 x 2 inch wood furring strips vertically over the building paper nailed through to framing members with nails of sufficient length to penetrate framing at least 1 inch. Apply lath to furring strips. Do not apply stucco direct to Nu-Wood Insulating Sheathing.

Masonry Veneer: Install stone or brick veneer in the usual manner, leaving at least $\frac{1}{2}$ inch air space between the masonry and Nu-Wood Sheathing. Nail metal wall ties at framing members only, using nails of sufficient length to penetrate at least 1 inch.

APPLICATION—SHIPLAP NU-WOOD SHEATHING: Apply 2 feet x 8 feet Nu-Wood Sheathing with the length at right angles to framing members, spaced 12 inches or 16 inches o.c. End joints should occur directly over center of stud. Space sheets approximately $\frac{1}{8}$ inch apart at ends. Place sheets so as to stagger end joints. Long edges should be in moderate contact.

Nailing: Nail 2 feet x 8 feet Nu-Wood Sheathing to framing members with 8d common nails or 2 inch galvanized roofing nails with $\frac{3}{8}$ inch or $\frac{1}{2}$ inch head. Space nails approximately $4\frac{1}{2}$ inches apart at every vertical support (six nails across width of sheet). The nails at the ends should be placed $\frac{1}{2}$ inch in from the edge.

Apply wood siding, shingles, stucco or masonry veneer in accordance with recommendations given above.



Fig. 17. Large Nu-Wood Insulating Sheathing Units Are Quickly Applied

NU-WOOD INSULATING LATH SPECIFICATIONS

DESCRIPTION

Nu-Wood Lath is made from standard Nu-Wood Board, cut to convenient, easy to handle units 16 inches x 48 inches in size, in either $\frac{1}{2}$ inch or 1 inch thickness. Long edges interlock by means of a simple V-type tongue and groove. Ends are square cut. Nu-Wood Lath has a thermal conductivity of .324 B.t.u. per hour per square foot per inch of thickness per degree difference in temperature. Plaster forms a natural bond with Nu-Wood Lath which exceeds 1,000 pounds per square foot, or several times that of wood lath.

Nu-Wood Lath fulfills all the requirements of Federal Specifications LLL-F-321a for Insulating Fibre Board. In order to meet these specifications, the product must have certain qualities with respect to conductivity, transverse strength, deflection, tensile strength, linear expansion and water absorption.

APPLICATION

General: Do not moisten lath units before application. Apply lath at right angles to the framing (or furring) members with rough side exposed and V joint "tongue" up. End joint shall center over framing members. Stagger end joints in successive courses. Stagger end joints at juncture of wall and ceiling.

Where cutting is necessary, the lath shall be scored with the point of the lather's hatchet and broken along the scored line. Where piecing out is necessary, use only strips of Nu-Wood Lath so cut that the V joint between units shall span between supports. Accurately cut and fit lath around electrical outlet boxes, piping, etc.

Spacing: Space ends of lath units $\frac{1}{8}$ inch apart. Bring V joint edges to moderate contact.

Nailing: Use No. 13 gauge, $1\frac{1}{2}$ inches long, blued special plaster-board nails with $\frac{1}{8}$ inch head for $\frac{1}{2}$ inch thick Nu-Wood Lath. For 1 inch thick Nu-Wood Lath use $1\frac{3}{4}$ inch length nails.

First nail units to intermediate supports, then nail ends. Space nails approximately 4 inches apart and not closer than $\frac{3}{8}$ inch to edges.

Reinforcement: All corners shall be reinforced with standard metal corner beads. All re-entrant angles shall be reinforced with standard expanded metal angle lath strips (cornerite). Reinforcement shall be securely stapled over the Nu-Wood Lath. Cover the center joint in all room ceilings with a strip of metal lath. On all ceilings over 16 feet wide, use two additional strips of reinforcement over joints approximately midway between the center and the walls. Reinforce areas above window and door openings with strips of metal lath. Also provide reinforcement at juncture of lath with masonry or other types of plaster base.

RELATED PROVISIONS

Framing: Construction framing shall be 12 or 16 inches on centers. Follow the standard recommendations of the Building Code Committee of the U. S. Department of Commerce and the National Lumber Manufacturers Association for all wood framing.

Furring: Fur all exterior masonry walls to receive Nu-Wood Lath with 1 x 2 inch furring strips set 12 or 16 inches o.c. accurately shimmed to a true, level plane. Secure substantially to masonry.

Grounds: Furnish and erect, substantially secured to framing members wood grounds to provide for full $\frac{1}{2}$ inch plaster.

Stock window and door frames which provide $\frac{3}{4}$ inch thickness for lath and plaster should be furred out as required. If special frames are used, they should be detailed to provide for full $\frac{1}{2}$ inch thickness of plaster over the lath.

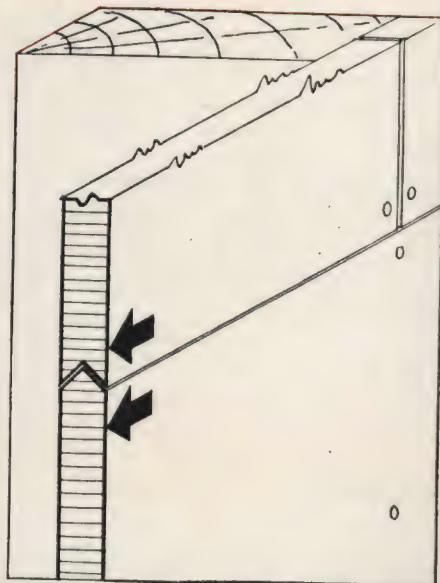


Fig. 18. V-Type Tongue and Groove Resists Trowel Pressure Above and Below Joint Over Entire Length of Lath

Plastering: Caution—Do not wet Nu-Wood Lath before applying plaster. Use standard gypsum cement plaster or gypsum wood fibre plaster for scratch and brown coats mixed accurately in accordance with the manufacturer's specifications. Plaster should set in about $1\frac{1}{2}$ hours and not to exceed 2 hours. Use any standard plaster finish over the brown coat, such as gypsum, lime, or lime gauged with gypsum.

Lime plaster or lime gauged with gypsum should not be used for scratch and brown coats.

APPLICATION OF PLASTER

General: Apply in three (3) coats to full $\frac{1}{2}$ inch ground in accordance with the plaster manufacturer's specifications. Surfaces shall be rodged to a true plane. All corners and angles shall be plumb and true. Wherever necessary and particularly on ceilings, provide plaster screeds to insure an even, uniform full $\frac{1}{2}$ inch plaster thickness.

The maintenance of a uniform full $\frac{1}{2}$ -inch thickness of plaster cannot be too strongly stressed. Most plaster defects where a fibrous or board plaster base is used may be attributed to a weak, thin plaster coat, inadequate to withstand the normal building strains of shrinkage, settlement, and vibration.

In applying the scratch coat of plaster, this shall be carefully pressed into all joints. If the brown coat becomes stiff and set during darbying, wet down the surface to allow for darbying without undue pressure against the plaster surface. Darby strokes shall be in the direction of framing members with the darby spanning at least two members.

Ventilation: Provide adequate ventilation for the proper drying of the plaster.

Due to the moisture-proof characteristics of Nu-Wood Lath, all plaster moisture must be carried off by the air in contact with the exposed plaster surface.

Heat: Provide adequate heat to prevent injury by frost.

**Wood Will Hold Its Natural
Strength for Generations**

NO Rot • NO Decay • NO Insect Attack

**When It's Treated with
WOOD TOX**



First line of danger from Decay and Termites: Wood near the ground and not even painted. But the Toxic in Wood Tox (pentachlorophenol) gives sure protection

**WOOD
TOX**

One Treatment for COMPLETE Protection BOTH Toxic and Moisture Repellent

It was an important advance when the wood-using public began to realize that wood could be treated to effectively control decay and insect attack, and demanded it. Wood Tox is the next big step—it provides this first protection PLUS practical and

adequate control of the absorption or loss of moisture by wood, holding its shape and dimension within closer limits than heretofore was thought possible. And the cost of this complete protection in one treatment is amazingly small.



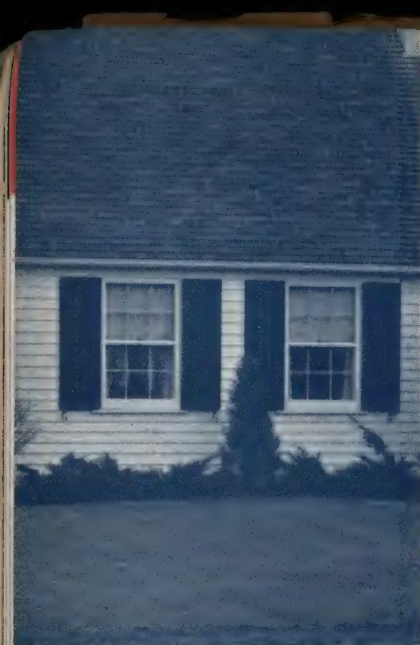
Once it is built strong, Wood Tox will keep it strong. Especially important for sills, studing, all framing.



New home; plaster not really dry. But there'll be no checking or pulling apart, for Wood Tox stabilizes woodwork.



Flooring may now be laid tight and kept tight, for Wood Tox treated flooring will neither buckle nor open up cracks.



Decay-proof, and snug; no drafts—yet windows open and close easily

Some wood species in use today for exterior walls, windows and doors do not possess, in their natural growth, the durability necessary to withstand such exposure to the elements—yet they are otherwise efficient and economical, and easily obtainable. Wood Tox strengthens them in their weakest spot, giving positive and permanent protection against decay and insect damage

(for pentachlorophenol, the powerful Monsanto toxic, is 5 percent of Wood Tox, by weight). But it does not stop with these benefits, for its moisture-repellent ingredient at the same time stabilizes the moisture condition of the wood, reducing shrinking, swelling, checking and warping to a harmless minimum. As a result, windows can be fitted snugly against drafts, yet will remain easy of operation throughout the year. Siding will not warp, nor will the paint peel. And even in the most difficult spots, the wood will not decay. The cost of this com-

ple, double-action treatment is less than ten cents per window, proportionately low for other parts of the structure.

Perhaps you have seen baseboards so shrunken they have pulled away from the floor—beautifully finished door casings showing unsightly cracks at every joint—stairs that would

Protect the Investment in YOUR HOME

Build so that the passing years will mellow your home, not age and weaken it, and so that upkeep costs will be held to a minimum, protecting your investment and preserving your joy of ownership. It can be done, simply and inexpensively, by insisting that every piece of wood—framing, sheathing, siding, flooring, sash, and the finished woodwork of all kinds—must have been properly treated with Wood Tox before installation in your home. Gone are the days when decay and termites must be expected; when shrinking, swelling and warping could not be avoided. Wood Tox prevents both types of trouble.

As to decay and insects, Wood Tox when properly applied is definite and positive in its prevention of any future damage. Concerning warp and other effects of moisture change, Wood Tox gives more than enough protection in most localities; but it is not completely waterproof.



Baseboard, casing, stairs—all stabilized as to dimension



Warpless doors and the drawers don't stick



If he can turn the knob he can open the door—yet it's snug and quiet

Floors, to be beautifully smooth and free of cracks the year 'round, must rely on the stability of each narrow strip. A difference in width that you scarcely can see, in only one strip—swelling only $1/32''$ —when multiplied by the number of strips in the room will add inches to the width of the whole floor, with pressure sufficient to cause it to buckle. Should you permit cracks in dry weather—or should you allow for expansion beneath the baseboard? Which? But if you buy flooring that has been treated with Wood Tox you need do neither; it will remain as it is laid, neither swelling nor shrinking and of course without warping or cupping. Besides, it will be protected against decay and termites.

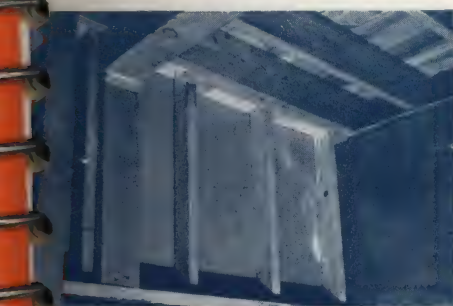
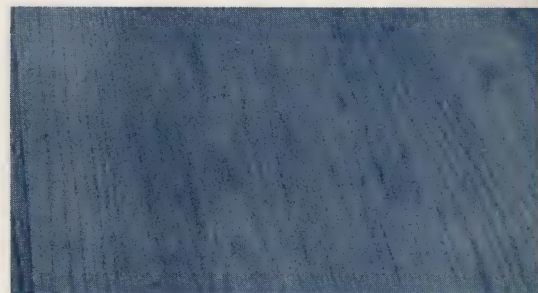
Even the squeaking and creaking of floors can be prevented, also, if in addition to the top floor, the sub-floor, joists,



Beautiful floors will keep their beauty in all seasons, when protected by Wood Tox, and will be safe from termites



Smooth—test it with a straight-edge, no cupping or buckling as seasons change, and no unsightly cracks in dry weather



Sills, timbers, joists, studding—permanently strong



Studding, bracing, sheathing and windows protected

timbers, sills and other framing likewise have been treated with Wood Tox (and assuming they are the proper size and grade for the job). Squeaks developing in a strongly built floor indicate that either the wood has shrunk or it has lost some of its strength by decay or termites. You cannot afford either. Sills—timbers—joists—studding—bracing—the bones and strength of your house, are all easy of access by fungus and termites. If either one should start it is likely—particularly with termites—that the cost of repair will be far greater than what Wood Tox treatment for every piece of wood in your house would require—and you still would not have the conservation of convenience and beauty which Wood Tox will give. Wood which has direct exposure to the outdoors needs this protection for the same reasons of economy and sustained beauty. Wood Tox treated lumber for porch floors, steps, columns and railings—for posts—for fences and trellises—for garages and garage doors—will assure continued service.

So don't just shop around for "lumber and millwork" when you build that home for your family—or a home to sell to someone else. For only a few dollars more we can supply you with Wood Tox treated lumber and millwork which will preserve the youth and strength of the house and its wood accessories for generations. This is wood as science has protected and perfected it. Accept no less.

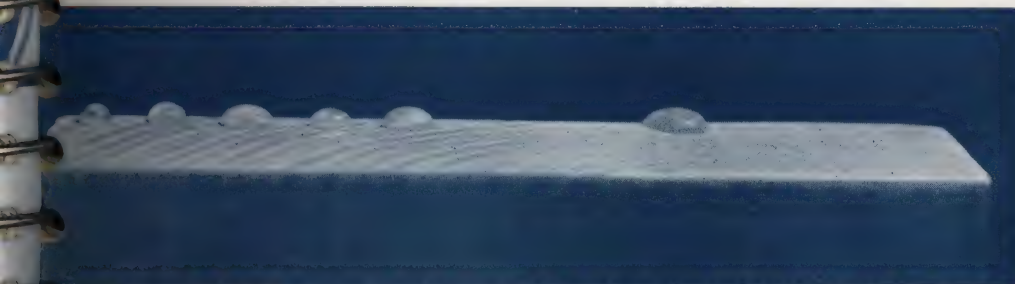


Porch floors, steps, posts and columns can be safe



Fences, trellises, garage doors need Wood Tox, too

Copyright 1940, by Wood Treating Chemicals Company, Chicago, Ill.



Left half of this pine 2x6 is Wood Tox treated; right, untreated. Five drops of water on treated, one on untreated.



After 50 seconds, only a damp spot remains where the drop of water was placed on the untreated wood; on the treated side the water will remain until it evaporates. Ask to see this amazing demonstration for yourself; the time required for absorption will vary, but the protection of Wood Tox will be positive and easily seen.

Wood Can Hold Its Shape and Dimensions

Wood Tox Controls the Moisture Changes Which Cause:

Warping and Twisting
Checking and Splitting
Swelling and Shrinking
Raising of Grain

WOOD TREATING CHEMICALS CO.

WOOD PRESERVATIVES
WATER REPELLENTS
FIRE RETARDENTS
PRESERVATIVE PAINTS

ENGINEERS AND CONSULTANTS

March, 1940

53 West Jackson Boulevard
CHICAGO, ILL.
HARRISON 2252

TO THAT DEALER IN EACH COMMUNITY WHO TAKES THE LEAD

We can't call you by name, in such a letter as this, but no matter--if you're the leader, you know it. What is more important, your community knows it, and looks to you as the purchasing agent to make better homes available to your fellow citizens.

In the preceding three pages we have described what you and your customers will come to recognize as one of the most important advances in home construction of this decade. We have achieved what you have been wanting these many years--control of the moisture changes of wood, as well as control of decay and insects, by means of only one treatment, WOODTOX.

Look what this will mean to your customers. Most of them have been demanding wood for building their homes, in spite of the intense ballyhoo for competing materials and the publicity given to certain faults, which wood in its natural form admittedly does possess. Faults or no faults, America likes wood for its homes, and demands it, and gets it.

For your requirements in WOODTOX treated LUMBER, many of the progressive sawmills are now installing the necessary treating equipment to provide treated flooring, siding, ceiling, finish, and general construction lumber, and all that is necessary for you to do when ordering such materials is to specify that they be treated with WOODTOX. The cost of having the mills do this for you is extremely low.

You can treat sash and all millwork items with WOODTOX right in your own yard, with an ease, speed and economy which will surprise you. We have designed simple dipping vats especially for retailers' use, and you can start immediately on the stock you now have, or buy. Your customers can have now the advantages which will become standard building practice within the next few years.

You do not need to wait. Write us today, mentioning the volume of millwork you need to treat for your customers, and we will let you know what equipment you will require. You will be surprised at its simplicity. The attractive circular (like the three preceding pages) has been prepared to help you tell your customers about WOODTOX. There are other sales helps, too. A brief request on your letterhead will bring full details.

Chemical science has made protection available to wood. It means added protection to your customers' homes. It means an extra profit for you.

Respectfully,

WOOD TREATING CHEMICALS CO.

EQUIPMENT



TODAY'S home builder has a right to a scientifically-designed structure fitted throughout with mechanical labor-saving devices built to give long years of service. The finest of heating plants, bathrooms, kitchen equipment, clothes washers, and water heaters are integral parts of America's modern small home.

In choosing your equipment from the many first-rate pieces of apparatus now on the market, balance initial cost against operating expense, comfort and convenience.

Appreciable savings in the cost of operating and maintaining essential services come with the realization that the first essential in good equipment is quality. While attractive appearance can usually be had without much additional first cost, the wise purchase is the one with the highest degree of essential ruggedness and efficiency.

But before any purchases are made it is advisable to list thoughtfully all of the items of equipment needed. This list will make possible an intelligent, balanced buying program.

Here's Long Life and Low Cost to Your HEATING SYSTEM

WHAT kind of heating for the new house? Every home builder must answer this question sooner or later. It is better to answer it sooner. It saves trouble, time, and money.

But how to find the answer? Where to get impartial advice? Why not seek it from the heating expert—the man who has made a life's study of heating—the man who is familiar with the performance, the durability, and the cost of operation of various kinds of heating equipment? In other words, the heating contractor. He will gladly offer suggestions based on his many years of experience.

What's the first thing you have a right to expect of a heating plant? There are really two factors, both equally important—dependability and economy. Much grief has been caused by heating plants that failed to measure up to keeping the house warm in cold weather, and heating plants that cost too much to operate.

AUTOMATIC HEATING

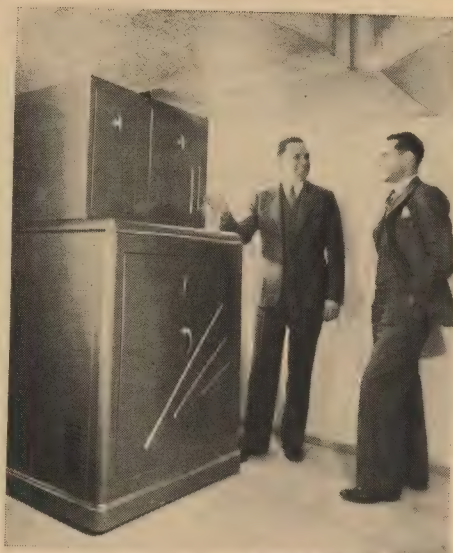
Automatic heating, of course, is the most important development in recent years. Everybody who builds a house would like to have automatic heating. Not everybody, unfortunately, can afford heating that is entirely automatic. Perhaps you can afford only semi-automatic heating. Or perhaps you can't afford automatic heating now, but hope to have it later. In any event, the thing to do is to talk the entire situation over with a heating contractor. If you cannot afford to go all the way in the direction of automatic heating he will see to it that you get as much as possible.

Trouble-free operation of the heating plant—that's what automatic heating gives you. But there are other advantages, too. One is the elimination of peaks and valleys in your temperature readings during the day.

That involves accurate control of the heating medium. Some kinds of heating plants are much more responsive to automatic controls than others. It all depends on the kind of heating plant. All of this is just another way of saying: If you want automatic heating, be sure you are going to get it.

Remarkable improvements have been made in residential stokers in recent years. More than 85 per cent of the stokers sold last year were of the type suitable for use in the individual residence.

The newest home heating stokers are completely automatic in operation even to the point of conveying the coal automatically from the bin to the fire.

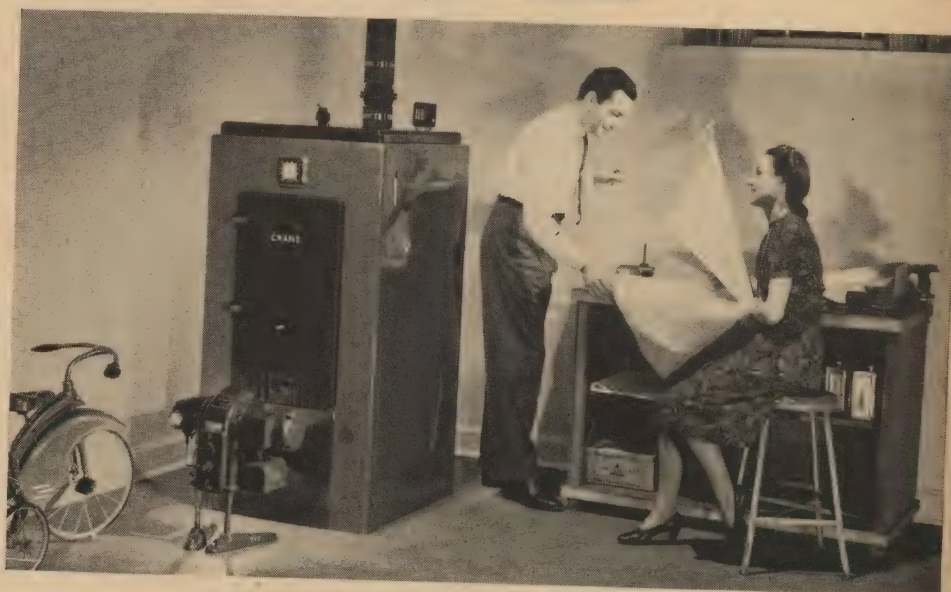


Surface Combustion Corp.

Compact, handsome, completely automatic—that's the new gas fired warm air furnace.

terfere with the ignition system. Meanwhile oil is being sprayed into the combustion chamber of your boiler. A stack switch will say "hold on" to the oil burner the instant voltage drops to the danger mark—the instant anything happens to interfere with the operation of the burner, whether due to a voltage drop, clogged spray nozzle, water in the fuel or empty oil tank.

Suppose you have a stoker-fired boiler. In mild weather your thermostat may not call for heat for several hours. Meanwhile the fire may have burned itself out. A stoker timer will keep it going during such intervals. It's an electric clock switch which periodically jolts the fire out of its lethargy by setting the stoker mechanism into action without prompting from the thermostat.



Crane Co.

This oil fired boiler, compact and handsome, leaves plenty of room for work and play space in the basement.

Mechanisms which operate on the principle of the human lung accurately control the volume of air supplied to the fuel bed.

Special fuels require special controls. The more automatic your heating plant, the more you must depend on thermostats, aquastats, automatic boiler level controls, and other such devices which protect your heating plant and your house from the danger of overheating or improper combustion.

If your fuel is oil, you need a stack switch to protect your boiler or furnace. Ever notice your electric lights suddenly go dim? That's due to a reduction in line voltage. Although it may last but for a few seconds, the drop in voltage may be long enough to in-

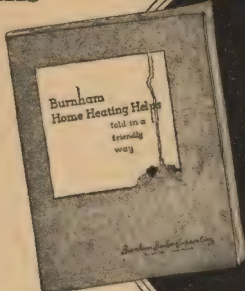
A low water cut-off is a very important accessory for a steam boiler that is automatically fired. By cutting off the fuel supply, this unit protects the boiler against the danger of cracked sections due to a dangerously low water level.

This is an age of speed. We demand fast acceleration from our heating plants as well as our automobiles.

Once a gravity warm air heating plant was fast enough. But not today. It was found that a fan would greatly speed up the distribution of heat in the ducts.

Similarly hot water heating plants at one time were all of the gravity type. Some years ago it was discovered that an electric pump would speed up the

Your Heating Problems Their Happy Solution



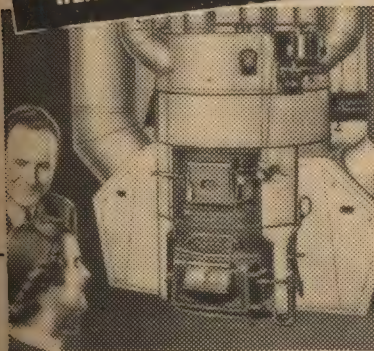
THIS book about heating in general helps you in a friend-to-friend way. It's not in the least technical. Still it does tell you just the things you want to know. Tells them quite as one friend to another.

Things about radiators. Oil heat. Gas heat. Hot water and steam. How to have hot water for bath and kitchen at least cost. There are several pages of Questions-and-Answers. In short, this book tells how to make sure of having the Cozy Comfort Heat you want.

Send for the book. It's free.

Burnham Boiler CORPORATION
IRVINGTON, N. Y. ZANESVILLE, OHIO

WHY NOT HAVE GUARANTEED PERFECT HEAT IN EVERY ROOM?



A HOLLAND FURNACE Is Real Comfort Insurance

Not only is a Holland Furnace the finest money can buy, but every installation is scientifically planned by our own trained engineer. Heating requirements of each room are individually analyzed so that all rooms must be uniformly heated. Nevertheless, pipe for pipe, casting for casting and size for size a Holland heating plant costs less than any other. For further details call Holland factory branch listed in your phone book or write for **FREE BOOKLET**

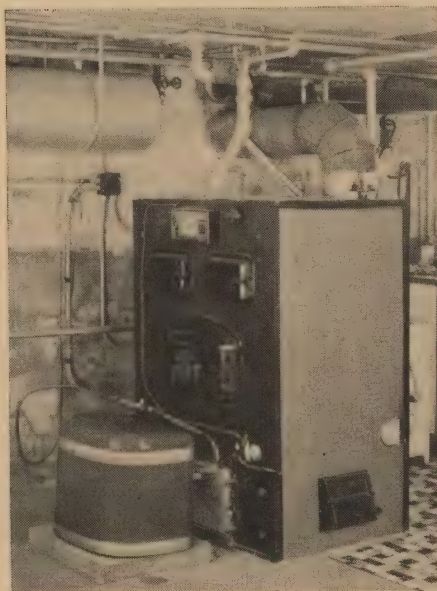
HOLLAND FURNACE COMPANY
HOLLAND, MICHIGAN
World's Largest Installers of Home Heating and Air Conditioning Systems

circulation of the water so fast that there would be an interval of less than a minute from the time the water left the boiler to the time it reached the most remote radiator in the house.

In the same way the operation of a one-pipe steam heating plant has been speeded up by improved air valves which hold an almost perfect vacuum in the radiators and pipe lines. The result is that steam literally flashes from the boiler to the radiators. The bugaboo of the old-fashioned steam heating plant was the air in the radiators. Today, thanks to the new air valves, there is no air in the radiators.

In an earlier paragraph attention was called to the desirability of draftless rooms. The place to prevent a draft is at its source—commonly around a window. That's why the heating unit, whatever it may be, should be placed as near to the window as possible.

One of the advantages of steam and



Weil-McLain Co.

Small in size but big in efficiency is this oil fired boiler especially designed for heating the house of moderate size.

hot water heating is that the heating unit, namely the radiator or convector, can be placed under the window where it meets the cold at its source. By preventing the spread of a chilly zone around the windows, a radiator adds to the usable space in a room. Furthermore, the heat output of a radiator is greater in air at a lower temperature. This makes for fuel economy.

The word radiator implies another advantage. The sun is a huge radiator. Every radiator is a little sun. Sun-like heat is healthful heat. The heat rays from a radiator travel straight out and warm all objects which they strike, including the walls. That's another reason why radiant heat is draftless heat. It does not require rapid air movement for rapid delivery.

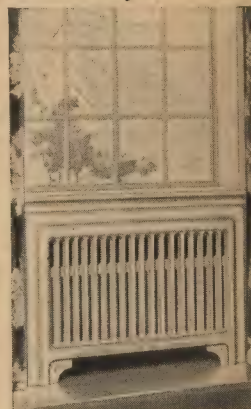


THE SUN IS A HUGE "RADIATOR"

Modern Radiators Are Small "Suns"

RADIANT SUNLIKE Comfort FOR EVERY ROOM

Before you decide on any heating system for your new home, think of the comfort you require on cold, wintry days . . . of the economy you demand for years to come. Weil-McLain Raydiant Radiators provide comfort heating . . . supply both radiant heat and convected heat. Placed under windows—in the wall and out of the way—they meet cold where cold comes in. Their heat-radiating front sends radiant, sunlike warmth into lower parts of room — assures warmer floors. Get the facts about the extra comfort that Weil-McLain Raydiant Radiators provide.



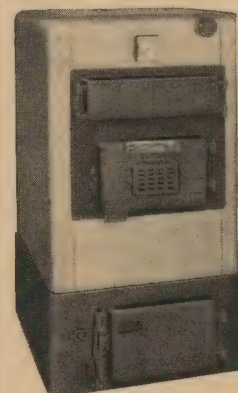
Weil-McLain "Concealed" Raydiant.

COMFORT AND BEAUTY UPSTAIRS

WEIL-McLAIN Radiant Comfort HEATING

THE ANSWER TO THE Small Home HEATING PROBLEM

ECONOMY AND EFFICIENCY DOWNSTAIRS



No. 67 All-fuel Boiler for Automatic or Hand Firing. which describes Weil-McLain Boilers and Radiators . . . and tells in simple, understandable language why you should have Weil-McLain Radiant Comfort Heating.

The new Weil-McLain No. 67 Boiler is an All-fuel boiler designed for hand firing with coal or coke or automatic firing with oil, gas, or stoker—made especially for efficient, low-cost heating of the modern small home—embodies the time-tested principles which have won for Weil-McLain Boilers an enviable reputation for efficiency and operating economy. Get full particulars about its fuel-saving features. Check its many conveniences. Consider, too, the protective advantages of No. 67's All-fuel design. Consult your Heating Contractor or send for free booklet

Weil-McLain Company

641 W. Lake St., Chicago, Ill. — 601 5th Ave., New York City
Factories: Erie, Pa., Michigan City, Ind.
Wholesale distributors in over 75 cities

MAIL THIS COUPON—TODAY!

WEIL-McLAIN CO.
641 W. Lake St., Chicago, or 501 5th Ave., New York City

Gentlemen: Please send free descriptive literature on Weil-McLain Radiant Comfort Heating.

Name

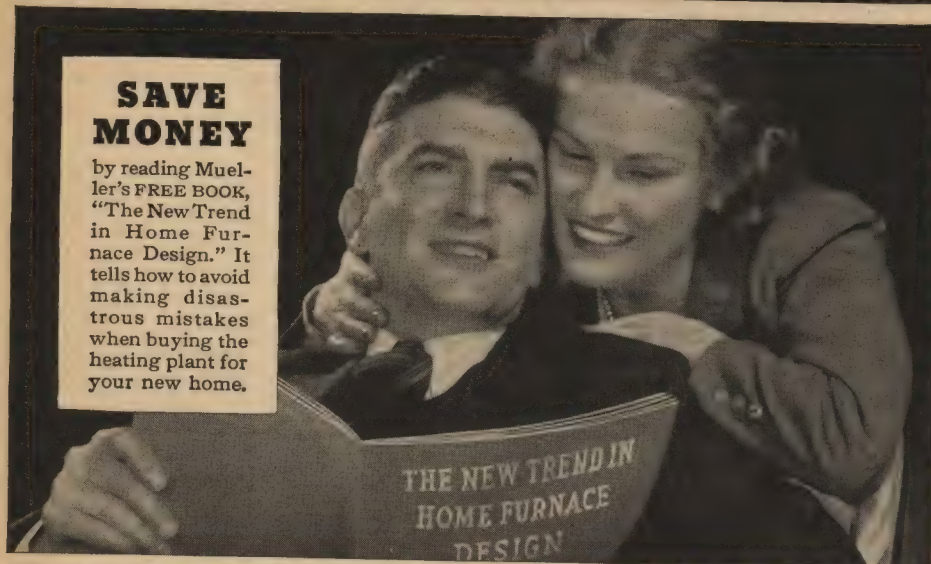
Address

City..... State

What's New in Furnaces?

SAVE MONEY

by reading Mueller's FREE BOOK, "The New Trend in Home Furnace Design." It tells how to avoid making disastrous mistakes when buying the heating plant for your new home.



In Your New Home you want the furnace that will best fit the needs of your local conditions and climate. You should see Mueller before selecting your furnace because Mueller manufactures equipment for all types of fuel—GAS, OIL and COAL. Mueller is your most logical source of information.



GAS Mueller Climatrol, Air Conditioning Gas Furnace, brings fully automatic heat and winter air conditioning in one compact unit. Climatrol Jr., Mueller's winter air conditioning gas furnace has been selected as the heating plant for the New York World's Fair No. 1 small home. Mueller also offers Flor-Aire (floor furnace) for small homes, and Gas Era Boilers (steam and hot water) for residential use.

OIL Mueller's streamlined Series "O" complete air conditioning oil furnace sets new standards of efficiency. Mueller also manufactures the Series "60" oil-fired air conditioning furnace. It cleans, filters, humidifies and circulates the air within the home.

Mueller's Pressure Atomizing burner ends fuel waste—turns every tiny drop of oil into useful heat. An exclusive Mueller feature.

COAL Furnaces have been streamlined and modernized. Mueller's new coal furnace for stoker firing is self-cleaning, eliminates fly-ash accumulation. Also simplifies removal of clinkers. Mueller manufactures a complete line of cast iron and steel furnaces for stoker and hand firing. Mail coupon now for complete data.

See the Mueller exhibit in the Gas Industries Building at the New York World's Fair.

There are two kinds of air conditioning, winter and summer. Heating is the most important part of winter air conditioning. Cooling is the important part of summer air conditioning.

If you have read this article so far you know how to get a good heating plant—and that's 80 per cent of your winter air conditioning. You can have the other elements—humidification, air cleaning, or ventilation—immediately or you can add these later.

One of the advantages of warm air heating is that the modern furnace is readily adaptable to air conditioning. Thus the gas fired furnace mentioned in the Utility Room story on pages 61 and



Stoker Manufacturers' Assn.

Coal is fed directly from bin in rear to boiler firepot in this stoker fired boiler.

62 is equipped with a filter that catches dust and dirt as the cool return air is fed into the unit, and also with a fan of generous size.

In the summer time filter and fan combine to create a movement of clean air through the house and many installations of this kind go a step farther by introducing a water spray or cooling coils to add further summer comfort. This use of the duct system for hot weather cooling is naturally most popular where cool water is available in ample quantities at reasonable cost.

Also if you want to cool your house in the summer, have your heating contractor install a good make of attic fan. An attic fan is the cheapest and most practical way for a man of moderate means to cool his house. An attic fan of adequate capacity will replace all the heated air in the house, including the attic, with cool night air, and will effect a complete air change as often as once a minute, if this rate is desired.

Unit room cooler should be considered, too. The modern units cost only a few cents per day to operate—and they dehumidify and filter the air as well as cool it.

MUELLER M MILWAUKEE
HEATING AND AIR CONDITIONING
COAL • OIL • GAS

SEND COUPON TODAY FOR FULL INFORMATION

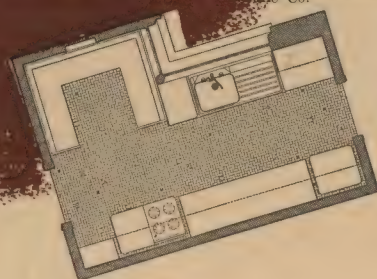
L. J. MUELLER FURNACE CO.
2015 West Oklahoma Avenue, Milwaukee, Wisconsin
Please send me "THE NEW TREND IN HOME FURNACE DESIGN"; also literature describing—
☐ Gas Furnaces ☐ Coal Furnaces ☐ Oil Furnaces
☐ Heat Levelizer ☐ Gas Boilers

Name _____
Address _____
City _____ State _____

"You'll find them all in the



KITCHEN"



KITCHEN planning—efficiency, expressed in compact arrangement of bright glistening appliances and colorful accessories—has produced in the modern small home a room that is enjoyed by every member of the family.

Children appreciate the charm of a cheerful well-planned kitchen. During daylight hours smaller members of the family find things to do here under mother's watchful eye, particularly if there is a breakfast nook and one cabinet at floor level is made available for their toys. Here in the evening the 'teen age boy and girl find ample lighting and convenient work surfaces for their "home work."

More and more women are sewing in their kitchens. An electric outlet is available for the sewing machine, and tidying up afterwards is so much easier in a room with a smooth, hard surfaced floor. The fold-away ironing board has its place in the modern kitchen too, and here again an abundance of work surfaces helps ease the strain of this once-a-week job.

The kitchen also has entertainment value. In the evening guests gravitate to this sparkling center of family living. From refrigerator and range come the ingredients of the midnight snack, and added zest comes from eating the refreshments on the spot.

A common sense study of the kitchen and its problems shows that this room embodies three areas of activity: 1. receiving and storing food; 2. cleaning and dish washing; 3. cooking and serving food.

For each of these three areas there is a "work center" so arranged that the work progresses quickly and with a minimum of effort. The relative arrangement of the three work centers is to a large extent dictated by the floor plan of the room and the placing of the doors and windows; but the general principal in all well planned arrangements is the same.

Close to the service door where deliveries are made is the storage area. Next comes the sink and counter area. The cooking range and another counter or table come next, and logically are situated close to the dining room door.

When kitchen planners refer to the "U" type, the "L" type or the straight line type they are merely indicating the general relationship of the three basic work centers.

The first or storage center includes a refrigerator, storage space for supplies not requiring cold storage and a nearby counter on which food may be prepared as it is taken from storage. The second area, for cleaning and dish washing, locates the sink between convenient

*...Rid Your Home
of Cooking Odors
and
Greasy Fumes*



With an Ilg Electric Ventilator installed in your kitchen window, every trace of cookery is quickly whisked away. All through the house, the atmosphere is clear and inviting. The Ilgette portable model, pictured here, can be easily installed and removed... does not interfere with curtains or opening and closing of window. Operating cost is only a few cents a day. See your electrical goods dealer or utility company, or mail coupon for booklet!

ILG ELECTRIC VENTILATING CO.
2808 N. CRAWFORD AVE., CHICAGO
Offices in 43 Principal Cities



VENTILATION
and Air Conditioning



Without obligation, send illustrated Ilg Electric Kitchen Ventilator Booklet.

Name _____
Full Address _____

counters with cabinets above holding necessary supplies.

Progressing from the storage and cleaning centers we come to the cooking and serving center placed next to the dining room door so that food may be carried in with no waste motion.

The various work counters which link refrigerator to sink and sink to range should be about the same height as the top of range and sink. Beneath each counter is a cabinet standing on the floor to hold, in racks or drawers, the appropriate tools.

BUY WISELY

For the man or woman who is planning to build a small home on a limited budget the point to be remembered is that all the efficiency and practically all the beauty obtainable in the most expensive installations is theirs, if they will buy carefully and plan wisely.

The basic appliances, refrigerator, sink and range, are available at surprisingly low cost if the buyer is prepared to forego a few "deluxe" features. The important considerations are efficient design and sound, sturdy construction.

Cabinets and counters are available in unpainted wood in many department stores and lumber yards, and with a

little ingenuity and a little paint can be made to look as smart as porcelain finished appliances.

Remarkable advances have been made in the finish, design and layout



Whitehead Metal Products Co.

This partial view of the kitchen in Demonstration Home Number One shows a glimpse of the dining alcove adjoining.

of steel cabinets. They are now finished with a fine quality synthetic enamel that has been baked on under high temperatures. This finish is easy to clean, will not discolor, chip or scratch. Door and drawer fronts are insulated to deaden the sound of opening and closing. To add to the quietness of operation, rubber bumpers are placed at all points where metal meets metal, excepting where it is welded together. The shelves are especially constructed to give extra rigidity.

CABINETS OF STEEL

The convenience of the design of the new steel cabinets is apparent in the arrangement of the well-equipped drawers and storage spaces in both base and wall cabinets. There is a cutlery tray for keeping cutlery at the fingertips; a tin-lined bread box, a removable bread board, ventilated vegetable drawers, towel racks, sifter bin and dish warmer. Cabinets can be supplied with a garbage pail attached to a door, and little step shelves which form a condiment rack.

Planned for the articles that go into them, both wall and base cabinets are standard units that fit the space requirements of any kitchen. Base cabinets are placed under sink and lino-

SAVE IN SILENCE IN YOUR SMALL HOME!

Only Servel freezes without noise, with no moving parts

WHEN you choose your refrigerator, here's something to remember: There's only *one* "automatic" that is never noisy... only *one* that can bring you the lasting savings of a freezing system without a single, moving, wearing part.

It's the Servel Electrolux Gas Refrigerator!

Owners find this different, silent refrigerator actually pays for itself with the money it saves—on operating cost, on upkeep, on food and ice bills. Keeps on saving money, year in and year out!

See Servel Electrolux at your gas company or neighborhood dealer's showrooms. Or write direct to: Servel, Inc., Evansville, Ind.



A TINY GAS FLAME DOES THE WORK!

As a result, you get—

- Permanent Silence
- No Moving Parts to Wear
- Continued Low Running Cost
- More Years of Savings

Plus . . .

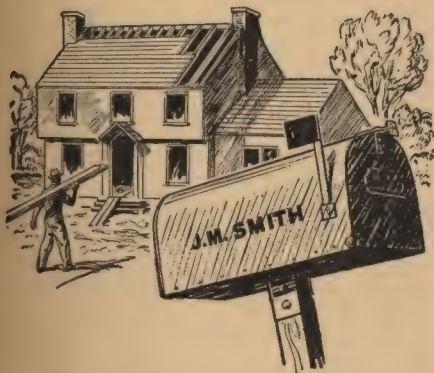
- Gas Company Service
- Fullest Food Protection
- Plenty of Ice Cubes
- Modern Beauty and Convenience



For Suburban and Rural Homes—models run on Bottled Gas, Tank Gas or Kerosene.



BUILDING IN THE COUNTRY?



Enjoy City Gas Convenience in the Kitchen

Even though you're building beyond the city gas mains, you need not go without city cooking convenience in your kitchen. Just be sure your architect specifies "Pyrofax" Gas Service!

"Pyrofax" gas is *real* gas...not a liquid fuel. You cook, heat water and make ice just as though your appliances were connected with the city gas mains! Burns with a clean blue flame—free of soot and smelly fumes.

"Pyrofax" gas regulating equipment is delivered and installed at your home for only \$9.75. Costs little to operate...about 3 cents cooks a whole meal for the average size family! Supply is *guaranteed* in writing by Carbide and Carbon Chemicals Corporation which for 19 years has rendered unflinching service to thousands of enthusiastic "Pyrofax" gas users. You're always certain of gas when you want it! Write for free booklet.

AUTOMATIC

Two cylinders (guaranteed to contain 100 lbs. of "Pyrofax" gas each) are delivered to your home—one for use—one for reserve. Automatic changeover device (optional at slight extra cost), turns on supply from reserve cylinder as soon as cylinder in use becomes empty.

"PYROFAX"

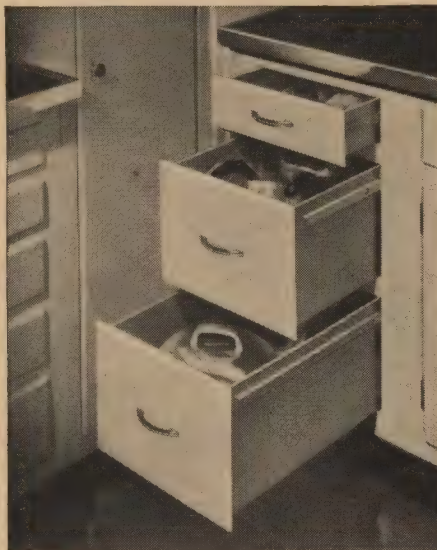
TRADE-MARK

DEPENDABLE GAS SERVICE
COOKS • HEATS WATER • MAKES ICE
in Homes Beyond the Gas Mains

Carbide and Carbon Chemicals Corporation
30 East 42nd Street, New York, N. Y.

leum-topped counters and the door and drawer space easily contains all kitchen accessories, from large pots and pans to table linens. Long vertical cabinets are especially constructed for the mop, brooms, and such articles; and the wall cabinets, available with either glass or steel fronts, are placed above the three main units of the kitchen.

And now a last word to those who may be planning to build in the country far from city utility services. For them the last word in modernity, in



KitchenAid

A drawer to fit every need is the objective of the modern kitchen planner.



KitchenAid

This vegetable bin is located beneath the sink in the work center of the kitchen.

kitchen range, refrigerator and water heater, is available, too. Bottled gas is the solution.

Many distributors of bottled gas have recently put into effect lower rates for increased usage, enabling many rural families to use gas not alone in the kitchen but for laundry drying, room heating, chicken brooders, incubators and milk can sterilizers.



KITCHENAID*

**Selected for No. 1 MODEL
SMALL HOME, N. Y. World's Fair**

KitchenAid is the only household mixer that beats, whips, mixes by the famous Hobart **PLANETARY ACTION** (which duplicates the movement of our PLANET about the Sun; around the beater goes in one direction, while turning on its own axis in the **OPPOSITE**). Finer results! Greater convenience! Complete help! It operates Meat Chopper, Vegetable Slicer-Shredder and other highly serviceable Attachments...directly, simply, easily, *without any extra "power adapter."* Extra years of better service make KitchenAid truly the **ECONOMICAL** buy! Get all the facts before you buy ANY food mixer.

KITCHENAID COFFEE MILL* FOR THE HOME

Grind coffee as you make it—enjoy full flavor and aroma. Mill grinds just right for your method—simply flip the switch. More convenient. Modern. You save money on coffee. At Appliance Dealers' \$9.75



* **HOBART
FOOD SERVICE MACHINES**

KitchenAid Appliances are made by HOBART, Leading manufacturer of Electric Food Service Machines for Food Stores, Bakeries, Commercial and Institutional Kitchens. Experienced Salesmen write Salesmanager.

The Hobart Mfg. Co. 700 Penn, Troy, Ohio
Please send complete information on

☐ KitchenAid Mixer ☐ Coffee Mill
☐ Ship one Coffee Mill (\$9.75 enclosed)

Name.....

Address.....

City.....



Mrs. Homemaker this is YOUR ROOM

Plan Your Kitchen Thoughtfully,
Select its Contents Carefully;
It Will Pay You Well.

By
Harold L. Martin, Manager
The Modern Kitchen Bureau

Dividends in TIME

DO you plan your day's work? Of course! Otherwise, minutes wasted would amount to hours before the day is done. Yet how much more important it is to plan savings which can be made *every* day throughout the year. A truly modern kitchen, because it's *expertly planned*, and because it uses *electricity*, saves endless time, steps and labor all the rest of your life. It's as efficient as a modern industrial plant.

Kitchen planning places the electrical equipment (range, refrigerator, water heater and dishwasher-sink), in a sequence similar to a factory assembly line. Each of the processes required in

the preparation of the meal moves smoothly along from one point in the kitchen to the next, without waste time or lost motion.

Instant hot water, available at the turn of a faucet, is one of the greatest of time savers in the modern kitchen. The electric water heater pays special dividends of its own, in bathroom as well as kitchen, of course—in safety, dependability, convenience, coolness, healthfulness and style. Electrically heated water pays you in real money-value savings because its efficient principle assures its economical operation year after year.



Dividends in ECONOMY

Efficiency in the kitchen comes through modern, automatic electrical equipment, designed to do specific tasks with precision and economy. And, when electricity does *all* the work, you benefit by the "step-down" rates. Having an all-electric kitchen, then, actually saves money. Besides, electric rates have been going steadily down.

This isn't all. The electric refrigerator, for example, is an economy in any home. It reduces waste by providing safe storage for perishables. Once you own an electric refrigerator, you can

buy food in quantities at quantity prices, and cut down the amount of money needed for the food budget.

You will discover that the electric range costs only "half what you think" to operate, and is fast in operation. You'll find big savings in the electric dishwasher-sink because it doesn't break dishes the way hand-washing does. Once you place them in the dishwasher-sink they remain stationary, and are not pushed about as in the old-fashioned dishpan, so that chipping and breaking are greatly lessened.



Dividends in CLEANLINESS

Electricity is clean. It cannot cause dirt or grime. Electric cooking, electric refrigeration, electric water heating and electric dishwashing are all performed by means of the same power that you use to light your home.

Neither the electric range nor water heater depends on open flame for heat. Thus the age-old problem of smoke and soot in the home disappears once you install them.

Modern electrical appliances for the

kitchen are made with cleanliness in mind. They have gleaming enamel surfaces free from dirt-catching seams or crevices.

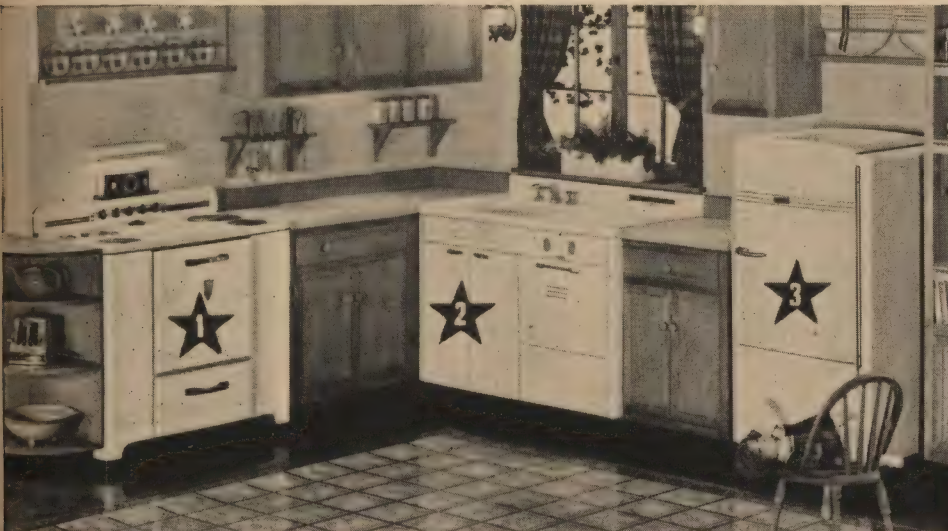
The electric dishwasher-sink—using water far hotter than you can keep your hands in—does make dishes and glassware, silver, pots, pans and kettles, scrupulously clean, and does a far more sanitary job than is possible when you must wash them in dirty, luke-warm suds and dry them with soiled towels.



Dividends in COMFORT

In old-fashioned kitchens, the refrigerator, sink and range are often miles apart. In such kitchens you actually walk hundreds of miles a year just getting from one of these appliances to another. A modern, planned all-electric kitchen saves steps because it is so well organized. It lets you work in comfort because it's arranged in a correct, straight-line "work sequence."

Why shouldn't your kitchen be as attractive and comfortable as any other room in your home? When you consider the amount of time you spend there, don't you deserve a comfortable place to work? Then have your kitchen completely equipped with modern electrical servants—each in its proper place, ready to deliver its best service to make life happier, easier, for you.



1 Hotpoint Electric Range with Calrod cooking unit cuts operating costs. Clean too. No flame or soot.

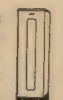
2 Hotpoint Electric Dishwasher-Sink washes and dries dishes automatically, disposes garbage completely, quickly.

3 Hotpoint Electric Refrigerator with vacuum sealed Thrift-master—by every yardstick a great refrigerator buy.

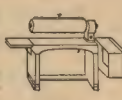
Hotpoint Washers—complete line of sizes. Famous Thriftivator triple-zone washing action gets all the dirt without harm to fabrics.



Hotpoint Electric Water Heaters give safely automatic hot water service—are economical to own and operate. Silent, flameless, odorless.



Hotpoint Ironers master the toughest ironing jobs while you sit down and guide the machine.



ELECTRIC RANGES • ELECTRIC REFRIGERATORS • ELECTRIC WATER HEATERS • DISHWASHER-SINKS • WASHERS AND IRONERS

NOW YOU CAN AFFORD A HOTPOINT ELECTRIC KITCHEN . . .

Now you can have a complete All-Electric Kitchen on the Hotpoint Friendly Finance Plan for as little as \$3.85 weekly! Now your carefully calculated Small Home budget can easily provide you with the new cleanliness, new convenience, and new comfort of a Hotpoint All-Electric Kitchen. Amazing money-saving features of Hotpoint Appliances keep the cost of operation down to about half of what you think. Homemakers today demand clean, safe electricity in their kitchens where they spend most of their time.

There is a *free* book for you and a *free* book for your builder, showing kitchens especially planned for low-cost homes. Send your name and tell your builder to send his. Use the coupon below. Remember, an electric kitchen in your new home will assure its being modern for years to come.

AS LITTLE AS
\$3.85 A WEEK BRINGS
YOU A HOTPOINT
ELECTRIC KITCHEN

Hotpoint

ALL-ELECTRIC KITCHEN

EDISON GENERAL ELECTRIC APPLIANCE CO., INC.
5860 West Taylor Street, Chicago, Illinois

Please rush me my free booklet on electric kitchens for small homes. I am an ☐ owner ☐ builder (check which)

Name _____

Address _____

City _____ State _____

Never before a Price like this ...

**MONEL SINK AND CABINET COMBINATION
AT LOWEST PRICE IN MONEL HISTORY**



THE
UNACRAT*

\$89⁹⁰
F.O.B.
FACTORY

Complete with Faucet and
Crumb Cup Strainer

* Trade-Mark

A BARGAIN IN BEAUTY! Today the advancing popularity of Monel kitchen equipment makes possible a "give-away price" of only \$89.90 for this beautiful and durable sink and cabinet unit.

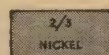
And look what you get! A one-piece double drainboard sink of solid silvery Monel — five feet long! No dirt collecting seams or cracks anywhere. The three-and-one-half-inch backsplash is

an integral part of the sink and cabinet top. Note that there are two Monel working surfaces, one on either side of the sink. That's a real convenience.

Now examine the cabinet made of the finest quality enameled steel. On the right, three drawers where you can stow away all sorts of supplies and kitchen utensils. On the left are two roomy storage compartments. Think of all the steps this arrangement will save you — every day.

THE INTERNATIONAL NICKEL COMPANY, INC., 67 Wall St., New York, N. Y.

Monel inherits from Nickel its finest qualities: strength, beauty and ability to withstand rust and corrosion. When you specify metals, remember that the addition of Nickel brings toughness, strength, beauty and extra years of service to steels, irons, non-ferrous alloys.



= Monel



the UTILITY ROOM, too, gives you more *Leisure Hours*

THE same kind of planning which has made the modern kitchen a joy to the eye and a boon to busy housewives is now showing its hand in the household utility room.

In many homes this utility room shares the basement space with a recreation or rumpus room. In other modern small homes, as in our Demonstration Home Number One at the New York World's Fair, there is no cellar and the utility room is on the ground floor.

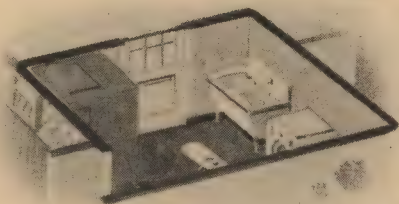
Whatever the location, the fact is that the compactness and cleanliness of modern automatic house heating units have made it possible to group, close to the heating plant, other centers of household activity such as home workshop equip-

ment for the men of the family and complete laundry equipment for the women.

The home laundry today is planned functionally, to save steps and make washing easy. Just as the modern kitchen has been engineered for best doing the work of preparing food, so laundry equipment should be placed to allow clothes to move in a direct line from the time they enter until they leave. A logical arrangement is sorting, washing (with provision for boiling and wringing), drying, sprinkling and ironing.

THE HOME LAUNDRY

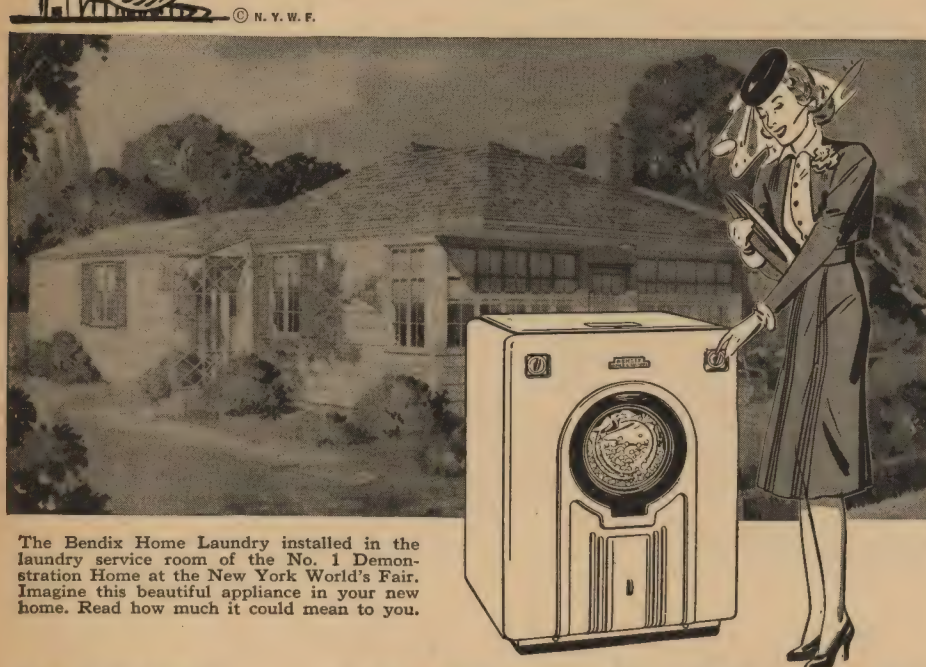
In these days of mechanical devices that take the hard work out of washing, there are wonderfully efficient laundry tubs, excellent electric washers and wringers, economical gas heaters, drying cabinets and mangles, and the familiar electric iron to speed and make pleasant the task of keeping the family supplied with spotless linen.



Above: A cut-away view of the Utility Room in Home Number One. At top: A photo of one wall. Pipes are exposed and hot water tank is "cut away" in keeping with the Town of Tomorrow "hidden products" motif.

BENDIX HOME LAUNDRY

Chosen for New York World's Fair
No. 1 Demonstration Home



The Bendix Home Laundry installed in the laundry service room of the No. 1 Demonstration Home at the New York World's Fair. Imagine this beautiful appliance in your new home. Read how much it could mean to you.

WASHES . . . RINSES . . . DAMP-DRIES **AUTOMATICALLY**

The Successor to the Washing Machine

WHEN the architects designed the ideal small home for the New York World's Fair small home demonstration, they chose the Bendix Home Laundry. It was the natural choice, since the Bendix Home Laundry, the successor to the washing machine, is the modern home method of washing clothes. Just a flip of the switch and Bendix does the wash . . . without attention from you.

No wonder tens of thousands of smart women already own a Bendix Home Laundry. It washes clothes, gives them three separate fresh water rinses, and spins them damp-dry . . . automatically. Your hands don't even touch water.

And besides saving time and work and protecting family health, the Bendix actually pays for itself . . . by using less soap and bluing and no more hot water

and electricity than washing machines, by far less wear on clothes, and by direct cash savings where a laundress is employed or clothes sent out.

Bendix also saves space and equipment costs in new homes, since no set tubs are needed with a Bendix Home Laundry. And the Bendix is so smart looking it can be installed anywhere.

By all means, see the Bendix in this No. 1 Demonstration Home when you visit the Fair. Visit your local Bendix dealer today for a demonstration, or arrange for a free trial in your home. The Bendix Home Laundry is easy to own with a modest down payment (often less than the trade-in value of your old washer) and convenient payment terms.

BENDIX HOME APPLIANCES, INC.
South Bend, Indiana



"The Bendix Home Laundry does all the work—so easily! It's marvelous! It washes my clothes so clean and fresh. And I love the way it spins clothes damp-dry! It saves so much wear and tear. I'm certainly glad I bought a Bendix!"

© BENDIX HOME APPLIANCES, INC.

And automatic equipment of this kind will save outside laundry bills for washing blankets and similar large pieces that cannot be handled by manually-operated apparatus.

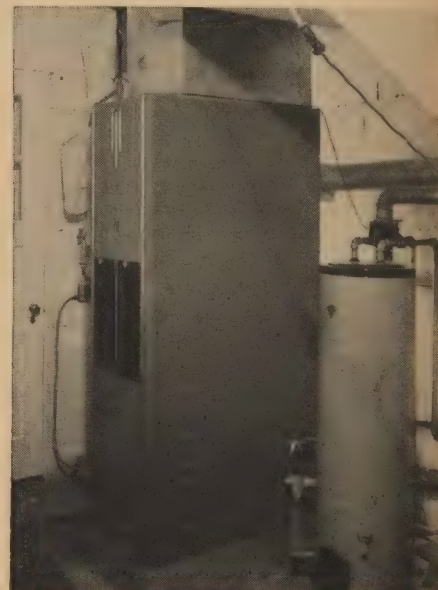
Referring again to our Demonstration Home at the New York World's Fair, the utility room here contains not alone the heating equipment and a complete power home laundry, but in addition is so designed that at a moment's notice it can be turned into a photographer's dark room.

The glass panes in the top of the split Dutch door can be covered with a zipper curtain, shutting out all light; and there is a two-way electric switch, one turn of which operates a photographer's red or amber light.

THE HEATING PLANT

Gas was the fuel chosen for the automatic heating plant in Demonstration Home Number One. The cleanliness and small size of the gas fired unit were factors influencing the choice as was the important consideration that no fuel storage space is required.

Many small home builders today elect a warm air system. In the basementless house the warm air furnace, centrally located in the utility room,



L. J. Mueller Furnace Co.

Small space in one corner of this utility room is all that is required for the automatic gas fired furnace.

introduces the heated air into the other rooms at ceiling level. The cold air displaced flows through underground ducts, often nowadays of sewer tile, back to the furnace.

Chock full of time and labor saving equipment, the modern utility room is generous to the housewife in its daily gift of precious leisure hours. It typifies the new goal in home and appliance design—more than ever before for your money.

Envy of the World— the American BATHROOM

THANKS to the development of new materials you can have a smart, colorful, and distinctive bathroom at very moderate cost.

Before you place your contract with a builder, be sure to visit the showrooms of the well-known manufacturers to see the many new fixtures now available for the house in the moderate price range.

If you haven't visited a plumbing showroom recently, you will be surprised to see how far even a slender budget will reach today to give you a bathroom that is right up-to-the-minute in style and convenience.

PLANNING IS EASY

It's easy to plan the bathroom. Despite the fact that you have a wider choice of materials today than ever before, bathroom planning isn't a complicated matter. In fact, bathroom planning can be a lot of fun if you will assemble your information and do your thinking in logical order around these four main points:

1. Location and size of bathroom;
2. Choice of fixtures;
3. Arrangement of fixtures, that is, layout for the room;
4. Wall and floor materials.

First, about the location of the bathroom. You will want to keep in mind the fact that there are economical and uneconomical locations for bathrooms. That's another reason why it is well to plan your plumbing carefully even before the plans for your house reach the blueprint stage.

Talk things over with a reliable plumbing contractor. Tell him what you have in mind, he can advise you if a slight shift in the location might result in a substantial saving in piping costs.

SAVE \$50 TO \$75

For instance, if you can bring your bathroom reasonably close to the kitchen, it may be possible to have the bathroom fixtures connected with the same branch supply lines that serve the kitchen sink. Similarly there may be some economy in waste piping. If the same stack can be used, the saving may amount to as much as from \$50 to \$75.

If you are having two bathrooms the most economical location is back to back. With such an arrangement there is a decided saving in piping and labor.

On the other hand, the most economical location for your bathroom may not be the most convenient. After all, you

are building the house for livability and convenience.

How large will your bathroom be? While it is possible to crowd all three bathroom fixtures into a space five feet square, this is the minimum size. Furthermore, it is not a convenient size. It is far better to have a bathroom, say, six by eight feet or better still eight by seven feet.

AVOID CROWDING

A larger bathroom is much more serviceable. You should keep in mind the fact that two people may occasionally find it necessary to be in the bathroom at the same time. A small, crowded bathroom is particularly inconvenient for older people. Therefore, think about the size of your bathroom before your architect makes the final plans for the house. Indeed, you will find a bathroom large enough to accommodate a linen cabinet very serviceable.

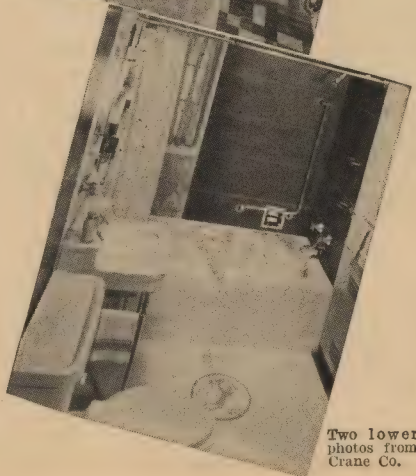
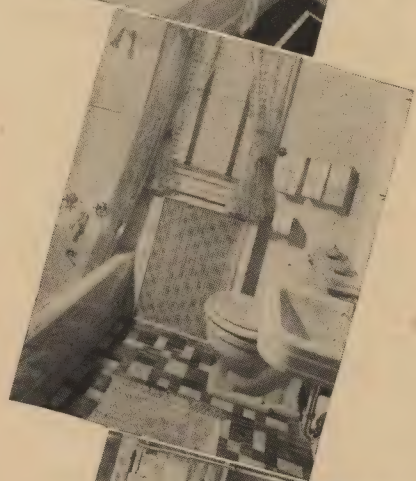
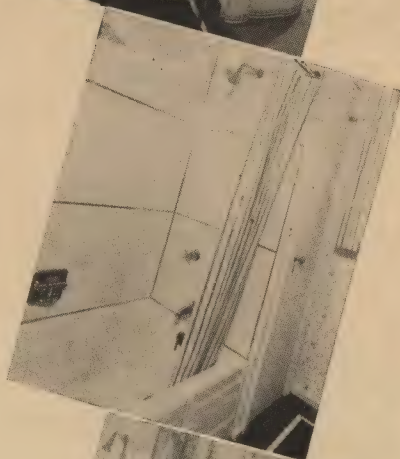
You should know the approximate size of your bathroom before you select your fixtures. Fixtures vary in size. In a larger bathroom, for instance, you will have room for a lavatory size 27 x 22 inches. If the bathroom is smaller you may have to use a smaller lavatory as for instance 24 x 21 inches. By the way, when your plumber mentions lavatory sizes, the size he gives first is the width of the lavatory along the wall. The last figure is the depth of the fixture from front to back.

THE MODERN LAVATORY

Probably you will buy a lavatory with a shelf back because of the convenience of the space for toilet articles. Some lavatories are equipped with metal legs and towel bars. This feature improves the appearance of the fixture and really doesn't add to the cost when you take into consideration the fact that you don't have to buy separate towel bars for the walls.

The better lavatories are made of china. The china in a lavatory is just like the china in a plate—hard, impervious, and easy to clean. It will not stain or discolor. Plumbing fixtures made of enameled iron are very serviceable, too, and cost less than those made of china.

The two views at top show the bathroom in Demonstration Home Number One. The shower stall faces the lavatory. The third and fourth pictures show similar compact arrangements in other small homes. Note the variety of wall and floor surfaces.



Two lower photos from Crane Co.

It always pays to buy good faucets. This is true of the kitchen sink faucet as well as the lavatory faucet and the valves for your tub and shower.

Faucets and valves are the wearing parts of your plumbing system. Just think how often in a day, yes, in an hour, you use the faucet on a sink or lavatory. Is there anything else in the house that is used so much—and sometimes abused? Probably not. That's why you should be careful to buy strong, sturdy faucets and ones with renewable wearing parts.

THE HIDDEN VALUES

The same thing is true of your water closet. There is a big difference between the cheaper and the better closets. They may look almost the same. The difference is where you can't see it—in the diameter and smoothness of the trapways and in the flushing mechanism concealed in the closet tank. There is also a big difference in closet seats. The sheet-covered seats are well worth the slight additional cost.

Your plumber will be able to advise you on the purchase of your closet. Your plumber knows what it takes to make a good closet, that is, a closet with a strong yet quiet flushing action, large and smooth trapway, and rugged and non-corroding flushing mechanism.



Crane Co.

The shower stall is set at an angle in this interesting bathroom arrangement.

The newer closets are particularly attractive in appearance because they are made all in one piece. If your budget won't permit you to have this style, then you will find the close-coupled type an excellent choice.

Will you want a shower in your bathroom? The latest in showerheads is the small, midjet head only about two and one-half inches in diameter. This type of head is practically non-clog-

ging and provides a splendid shower with from 25 to 50 per cent less water than the larger heads.

While you are thinking about your fixtures you will begin to visualize them in the room. Where will you place the tub? Don't put it under the window if you can avoid it. It is difficult to open the window and the bather is subjected to drafts.

Regardless of what you pay for your lavatory, its shiny chromium fittings and graceful shape make it the most attractive fixture in the bathroom. It should be placed where it will get attention when the door is open.

Choose the most secluded spot in your bathroom for the closet, even if this is only the space farthest along the wall away from the door. If the room is large enough, many homeowners place not only the bathtub in a recessed nook, but the closet as well.

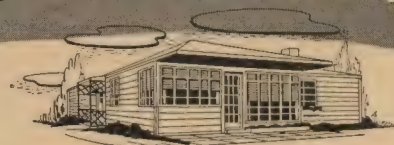
NOW—THE WALLS AND FLOORS

Plan to have the walls and floor of your bathroom set off the sheen of your bathroom fixtures. Authorities estimate that there are now about 30 materials, all waterproof, that may be used on bathroom walls. These include ceramic tile, glass, stainless steel, porcelain, enamel tile, linoleum, asbestos tile, board tile, composition board, and mod-



In the No. 1 house—in the Town of Tomorrow at the New York World's Fair, the bathroom is by Crane—as are the bathrooms in all 15 houses in this group.

TO HELP YOU PLAN THE BATHROOM IN YOUR HOME



IT'S amazing what convenience and efficiency can be packed into a well designed, small bathroom—how comfortable and beautiful that room can be made as well. To help you have just that kind of bathroom, we have prepared a special book in colors to tell you about bathroom arrangement. It contains interesting little ideas you can use to make your bathroom more practical and more charming. Included also is a color guide that shows many color harmonies from which you can select the one best suited to your tastes.

The complete Crane line includes fixtures exactly designed for use in the small room—compact, efficient fixtures that are low in cost yet handsome in appearance. Your Plumbing Contractor will gladly tell you more about them—and you can buy them on the Crane Budget Plan if you wish.

But whether you are planning to build a new home or improve your present one, be sure to send for Crane's Bathroom Planning Book. It's free! Use the coupon below.



CRANE

CRANE CO., GENERAL OFFICES: 836 SOUTH MICHIGAN AVENUE

VALVES • FITTINGS • PIPE • PLUMBING • HEATING • PUMPS

CRANE CO. SH-39
836 S. Michigan Ave., Chicago, Illinois
Gentlemen: Please send me a copy of "HOW TO PLAN THE BATHROOM YOU'VE ALWAYS WANTED."

Name.....

Address.....

Town.....State.....

ern washable wallpaper. Many people prefer the clean look of white tile. Tile incidentally is now available in various pastel shades of peach, green, and orchid. These wall and floor materials, while they last the life of the house, are expensive. Materials that offer greater variety and are easier to apply, average about half the price and are consequently, more popular.

Linoleum materials, for instance, are water-repellent, heat resistant, and resilient, and the colors are permanent. A linoleum or linoleum-like composition floor can make a beautiful contrast to waterproof papered walls. Sometimes the wall around the tub is protected from water stains by inlaid linoleum or a chromium-plated molding.

Or, if more variety is desired, paint may be applied shoulder high in a color that will blend with the wallpaper of the ceiling and upper walls. Paint is water resistant, costs little to apply, and consequently can be changed often.

WASHABLE WALLS

Washable wallpaper is perhaps one of the most commonly used of materials, and one type is now claimed to be equivalent to about four coats of paint. These water-repellent papers are manufactured in many different patterns.

A hardwood prestboard may be applied to the walls. This can be painted



Crane Co.

What can be done in small space and with moderate money outlay is illustrated above.

in any color desired, or it can be obtained in a material marked to give a tile-like effect.

Another type of bathroom wall for medium-priced homes is a composition material with a surface of bakelite, celluloid or baked on enamel. It looks very much like genuine tile, and like the prestboard and linoleum, can be applied over present walls without tearing down the plaster. This is a little more expensive than linoleum.

CHOSEN FOR THE "HOME OF TOMORROW"

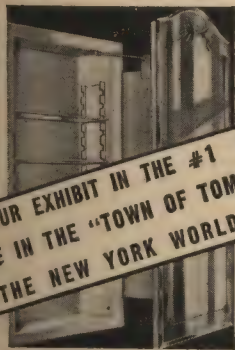


REMINGTON AMERICA'S NO. 1 SHAVER

A new mode for better living—dual-duty rooms—every modern comfort and, of course, the Remington Electric Close-Shaver, last word in modern shaving comfort, for men of tomorrow.

General Shaver Division of
REMINGTON RAND INC.
BRIDGEPORT, CONNECTICUT

BATHROOM Fixtures



The Columbia Quality Bathroom Cabinet and Columbia Quality Chromium Plated Accessories were specified by the official architects of the Town of Tomorrow and approved by the WORLD'S FAIR Board of Design.

Columbia Metal Box Co.

260 East 143rd St., N. Y.

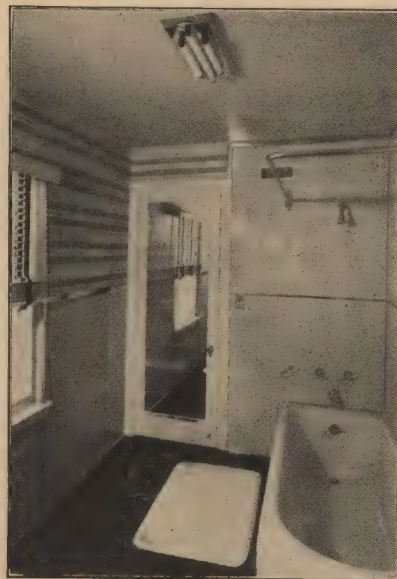
COLUMBIA METAL BOX CO.,
260 East 143rd St., New York, N. Y.

Please send me your Booklet on
Bathroom Cabinets and Accessories.

NAME.....
ADDRESS.....

Small-Home Beauty Quiz ANSWER: IS IT TRUE OR FALSE?

The necessity for incorporating beauty, utility and economy into remodeling and modernizing the home impels one to be choosy and discriminating in the specifying of material. To this end, the smart thing will be to investigate how Gibbs Boardtile adapts itself to these exacting requirements:



● GIBBS BOARDTILE provides a durable wall and ceiling surface, easily and quickly applied as wall board.

● SMOOTH as porcelain, COLORFUL as a rainbow, WASHES like a china dish, 100% sanitary.

● BEAUTIFUL as feathered grains of finest woods at a fraction of their cost; possesses the character of expensive marble; impervious to grease, vermin proof, wears like iron, but light in weight; obtainable in a wide variety of solid colors, duo-tint and striped effects.

Home owners, architects, builders, contractors are invited to extend their small-home beauty quiz by referring to Gibbs Boardtile booklet, color charts and ideas for utilizing ultra-modern Gibbs Boardtile.

Gibbs Boardtile Was Specified by the Official Architects of the Town of Tomorrow, and Approved by the New York World's Fair Board of Design so it must be TRUE!

Write today for generous free sample and suggestions for modernizing living rooms, bathrooms, kitchens, breakfast nooks, panelled dens, libraries, store interiors, laboratories, theater lobbies, and any wall or ceiling at low cost. Consult your builder. In the meantime simply address:

GIBBS BOARDTILE CORPORATION
653 NORTH ABERDEEN STREET, CHICAGO

GIBBS BOARDTILE

NOT A SUBSTITUTE, BUT AN IMPROVEMENT

Taking the Mystery Out of Home Building

By C. STANLEY TAYLOR, Editor

(Continued from page 7)

reasonably commensurate with the size of the house they wish to build. Therefore, if you are dreaming of a new home transmute your present rent payments into the actuality of an owner's deed. In most cases your operating overhead will not be as great as present rent.

Mr. and Mrs. America usually begin the dream of home ownership by collecting data from magazines and newspapers including plan suggestions and ideas regarding every phase of home ownership and domestic operation. This is a good thing to do and the "scrap book" probably always should be the Baedeker or bible of the prospective home owner. However, there are many short cuts even in the pleasant function of working out the home of their dreams.

When You Decide to Build

THE first step toward home ownership is to acquire or develop a plan. In this low cost home investment there is usually no room for a full architectural fee, but there is an easy way out—through the easily available "stock plan" service, of which the progressive lumber and building material dealer is perhaps the leading exponent. These "stock plans" in no way cast any reflection on the value of architectural services because it must be realized that all good stock plans were originated by a good architect somewhere. For example, there is a live building material dealer in your community who has a selection of stock plan books from

which you can find a plan closely approximating your needs and on which he has or can obtain for you complete working drawings and specifications at little or no cost. Today's leading producer of such stock plan books and data on small homes (which are available through your local dealer) is the National Plan Service of Chicago. This organization maintains a number of architects licensed to practice in practically every state of the Union and all of the house plans are developed in accordance with the requirements of FHA. There are other good sources of stock plan books (and complete ready-to-build plans and specifications) such as manufacturers and manufacturers' associations, most of whom distribute through dealers. Thus there are immediately available to you through direct contact in your own community or through any of the leading home interest magazines, hundreds of good stock plans of moderate cost homes. In this Year Book beginning on Page 13 will be found a typical collection of such stock plans available through your local lumber and building material dealer almost anywhere. Incidentally, if you like our own "Dual Duty" home as described on Page 14 you or your dealer can get the complete working drawings and specifications at a very nominal price by addressing the National Home Builders Bureau.

After plans have been acquired or decided upon there come the problems of financing, construction and equipment as described in considerable de-

tail in following sections of this Year Book. There are also the problems of selecting the contractor who may be depended upon to build your house in a satisfactory manner.

Short Cuts in Home Building

FOR Mr. and Mrs. America there is a very real short cut toward the solution of most of these problems. A visit to a progressive local lumber and building material dealer's office will have surprising results. He is no longer an order-taker sitting in his dingy office waiting the call for some two-by-fours and cement. He is a live local merchant who has taken his place in his community as an expert on problems related to the building of a moderate cost home. If Mr. or Mrs. America or any of the little Americas get sick, they naturally go to a doctor. If Mr. America gets into legal difficulties he seeks a lawyer, or if he needs a loan he goes to a bank. Similarly the prospective home builder is learning to take his problems to this local expert who understands these difficulties.

American home builders are learning rapidly that the modern lumber and building material dealer not only is able to furnish a variety of stock plans and, of course, most of the materials and equipment for a home building project, but he is also well able to advise on financing, mechanical equipment and practically every other problem which confronts the Americas-who-are-about-to-build-a-home.

MANUFACTURERS WHO PARTICIPATED IN OUR WORLD'S FAIR "DUAL DUTY" HOME

THIS was Demonstration Home No. 1 in the Town of Tomorrow at the New York World's Fair 1939. Over one million people paid a special gate fee to visit the 15 Demonstration Homes in this exhibit. Our "Dual Duty" home proved so popular that replicas of it are

being constructed and publicized by progressive builders in dozens of American communities as demonstrations of practical methods and materials for the construction of today's moderate cost homes. Products listed below were specified for these Replica Homes.

FRAMING AND SHEATHING: Western Lumber Company, Cando Line framing and building lumber.

EXTERIOR WALLS: Ebbett-Kellogg, Processed and Cedar Shakes.

ROOF: Certain-teed Wood-Tex Shingles.

INSULATION: Balsam-Wool Saturated Insulation.

GLASS AND MIRRORS: Libbey-Owens-Ford Glass.

WINDOWS: Anderson Casements and Marolene Double Hung Windows.

HEATING AND AIR CONDITIONING: Mueller-Christie-Hammon, Elementary Unit, Air Conditioner.

WALL FINISH: No-Wood Walls, Stucco Ceiling and Kolor-Trim Mouldings.

PLASTER BASE: National Gypsum Gold Bond Floating Wall.

TILE: Gibbs Boardtile.

FLOORING CORK: Corinco Cork Flooring in Living Room, Dining Room and Master Bedroom.

FLOORING LINOLEUM: Shone Linoleum in Kitchen, child's bedroom, utility room and bath.

INTERIOR TRIM: Trimpak packaged trim.

PAINT: Benj. Moore & Co.

HARDWARE: Lockwood Hardware-Mfg. Co.

ELECTRIC DOOR CHIMES: Rittenhouse Electric.

WATER HEATER: Roud with Morden Tank.

SHEET METAL WORK: Anaconda Sheet Copper.

PLUMBING FIXTURES: Crane's tub, lavatory, closet, bathtub, fittings, and concealed piping. Columbia bathroom cabinet and accessories.

PIPING: Anaconda Copper Tubes.

KITCHEN EQUIPMENT: Whitehead Metal Cabinets, Model Cabinet Sink, and Range, Servel Electrolux Refrigerator.

FIREPLACE EQUIPMENT: Heat-lator metal fireplace form.

CIRCUIT BREAKERS: Square D Multi-Breakers.

VENTILATION: REGETTE Ventilator, Knauss ventilator and No. 40 Fan.

LAUNDRY: Bendix Home Laundry.

LIGHTING FIXTURES: John C. Varden Company.

BLINDS, SHADES, WALL PAPER: Cluiper Corp.

"PYROFAX" GAS: Pyrofax Gas, "the burner beyond the gas meter."

FURNITURE: Haywood Wakefield, Lullwater juvenile furniture, Wurlitzer Piano.

EQUIPMENT: Includes Singer Sewing Machine, Hoover Vacuum Cleaner, Kitchen Aid, Remington Typewriter and Electric Shaver.



Now

**A MONEL SINK and a
MAGIC CHEF RANGE** *give you*
A MODERN "PLANNED KITCHEN"
at prices you can afford!

MAGIC CHEF RANGES WITH MONEL TOPS

The world-famous Magic Chef ranges are available with Monel tops on these Models: 3401-0, 3001-0, 4814-14, and the 3914-14. Also available with C-P (Certified Performance) features.

Their Monel tops make them lovely to look at, delightful to work with, and easy to clean, while their Magic Chef features make them "the gas ranges of tomorrow". Phone your dealer about a Monel-topped Magic Chef today.

NOW that you're actually building the home you've dreamed about for years, you want to be absolutely sure that its kitchen equipment is the best obtainable—on your budget, of course . . .

Or if you're tired of your old kitchen and its step-wasting, oddly-assorted equipment, here's how you can give your home a kitchen you'll be proud of for years . . .

You can have a modern, "planned" Monel kitchen at a new low price, by using a Magic Chef Monel-topped gas range and a Whitehead Unacrat Monel sink. You probably own a good modern refrigerator, or have your eye on one. Take care of the other two work centers with a Magic Chef and a Unacrat, and there's your modern, "magazine illustration" Monel kitchen!

Several Magic Chefs are available with Monel tops, as well as the Monel Duocrat described on the next page. They match the Unacrat perfectly—height, width, straight-line arrangement, recessed toe-space.

Using these two units, your kitchen working surfaces are Monel. This cheerful, silvery metal can never rust, is solid, tough, and strong as steel. Its resiliency reduces kitchen clatter. Monel actually improves with cleaning, like fine sterling. Monel resists staining and food acids—is safe to use. It is unharmed by hot utensils.

By using these two units, you have the basic elements of a planned kitchen. As you prosper through the years, you can add new Whitehead Monel-topped pieces, and they'll match these two units like peas in a pod. You'll find the new "Junior" Whitehead line very reasonable in price.

THE MONEL UNACRAT

**NOW
SELLS
FOR** **\$89⁹⁰**
F.O.B. FACTORY

What a bargain in beauty, convenience, and durability! The Unacrat is a 5-foot, double-drainboard Monel-topped cabinet sink complete with faucet and strainer, 3½" backsplash. One piece sink and drainboard construction—no crevices or crannies to catch dirt. Cabinet is high-grade furniture steel, fully insulated, with a baked chip-proof enamel finish. Bullet catches, anti-friction slides, concealed hinges. A 3 drawer unit and 2 roomy storage cabinets form the base.



"HERE WE ARE TOGETHER . . ."
say the Sink and the Range,
 "TO SAVE YOU THOUSANDS OF STEPS"



Monel-topped Duocrat and Monel-topped cabinets make this kitchen so attractive you'd like for your guests to catch a glimpse of it from the dining room. . . . This one was installed in a very moderately priced home.

Here's an installation of the 72" Mo
 Note how perfectly they line up t
 span through the years.

THE DUOCRAT COMBINES THE SINK AND THE RANGE

Back and forth . . . range to sink . . . sink to range . . . sink to cabinet . . . millions of steps!

This new Duocrat will save those miles of useless kitchen hiking! Here, under a continuous Monel work surface is a regular full size Monel sink and a fully insulated up-to-the-minute Magic Chef range. The one-piece drainboards provide plenty of working space.

THE MONEL SINK AND RANGE TOP

Monel is tougher and stronger than structural steel . . . it's a solid metal—with no coating or plating to chip or

wear off. Easy to clean, and the more you clean it, the better it looks. Drainboard and backsplash are formed as one-piece construction—no cracks or crevices to catch dirt.

THE WHITEHEAD STEEL CABINET BASE

Highest grade furniture steel—welded construction with baked-on finish. All its surfaces are smooth and easily cleaned. Concealed hinges. The bullet catches hold doors securely, yet open easily. Drawers are insulated and rubber bumpered, roll on anti-friction slides for quiet operation. Recessed toe base. Two types of cabinets—full drawer—and the cupboard style (one-shelf compartment and cutlery drawer.)



Here's a beautiful kitchen — showing how you can add a Duocrat to existing Whitehead cabinets and get a perfect kitchen as a result. The cabinet-topped Duocrat was installed two years after the other Monel-topped equipment went into service.

sink, and a No. 3914-14 Magic Chef.
anned" kitchen that will stay spic-and-

THE BEAUTIFUL UNIT

THE MAGIC CHEF GAS RANGE

Three-in-one non-clog type burners . . .
Hi-low valves regulate gas exactly, from a
sint simmer to high-speed heat . . . auto-
matic top lighter lights burner the instant
valve is opened . . . A high-burner tray
conceals all mechanism and makes clean-
ing easy . . . Ovens are fully insulated, both
top and sides . . . Famous "Red Wheel"
automatic oven control maintains oven
heat exactly . . .

SIZES

Sizes range from 48" to 168" overall, with
intermediate sizes to fit any kitchen plan.
All are the proper 36" height, and all are
36" wide. See the next page for complete
details.

Starting the water for the vegetables used to
mean a trip to the pot closet — then to the
sink — then to the range. When you own a
Monel Duocrat, you can do all that without
taking a single step. The sink is within
arm's reach of the range.



Here you are at the Monel sink of your
Duocrat*. If the sauce boils over — or the
oven needs to be turned on — you don't
have to move an inch. Note that there is no
dirt-collecting crack between the range and
the sink. The smooth "flow" of Monel is
unbroken!



The "Magic" of Magic Chef



Model 4814-14. Beautiful Monel-topped Magic Chef with divided work top. Large Monel work space between burners will accommodate even extra-large kettles with ease. Hi-lo simmer set valves give "tailor-made" heat for any cooking job.

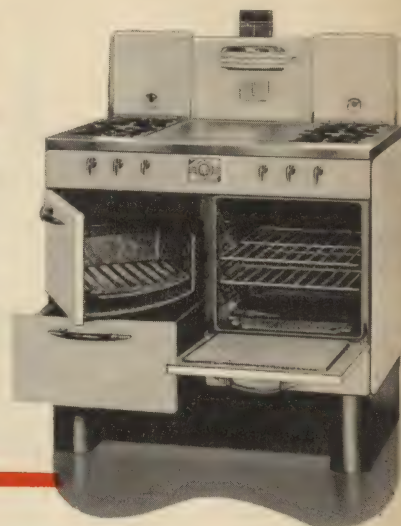
Magic Chef ranges are lots more than just gas ranges—you'll find that out the minute you begin cooking with one.

The famous Swing-Out Broiler eliminates stooping and squatting, and prepares delicious broiled foods with less fuel, time and labor, without smoke. Pan and grid are enameled, easily removed and cleaned.

Magic Chef high-speed ovens are of large capacity, and specially designed to eliminate cold spots. The famous Red Wheel regulator maintains exactly the temperature you want. No projections to catch hands or cloths.

Such features as: instant lighting, non-clog even-heating 3-in-1 top burners, Hi-lo valves, handy timer on many models, removable oven bottoms, separate broilers and ovens, wide-slotted grill in broiler, and smooth enamel finish on broiler compartment, oven, and exterior, make these ranges capable of magical performances in your own kitchen.

Model 4814-14, showing oven and broiler. Note the large new grid pan swing-out broiler, smooth rounded enameled lining of oven, and heavily insulated oven door. This Monel-topped model is "tops" in convenience, beauty and durability.



THE DUOCRATS

Duocrats are available with 2 sizes of stoves: 24 inch and 39 inch. The 24 inch stove has four surface burners, full-sized oven, with oven heat control and broiler. The 39" stove has a full-sized Magic Chef range, full-sized oven with automatic heat control, and swing-out broiler.

DIMENSIONS OF DUOCRAT WITH 24" STOVE

MODEL No. Standard Ensembles	ACTUAL OVERALL			Length of Sink Bowl	Range Top Opening	Space Between Sink Bowl and Range Opening	Length of Drain- board
	Width	Length	Height				
DPKC 2048L*	25	48	36	20	17	5 1/4	2 1/4
DPKC 2048R*	25	48	36	20	17	5 1/4	2 1/4
DPKC 2072L*	25	72	36	20	17	5 1/4	26
DPKC 2072R*	25	72	36	20	17	5 1/4	26
DPKC 2084	25	84	36	20	17	11 1/2	32

*R and L indicate right or left hand drainboard.

DIMENSIONS OF DUOCRAT WITH 39" STOVE

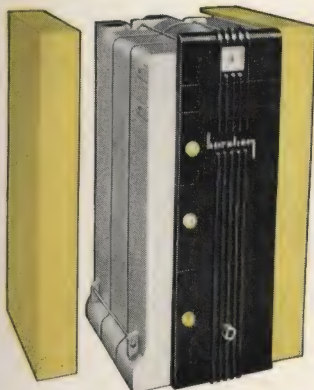
MODEL No. Standard Ensembles	ACTUAL OVERALL			Length of Sink Bowl	Range Top Opening	Space Between Sink Bowl and Range Opening	Length of Drainboard (Left of Sink Bowl)	Length of Work Top (Right of Range Opening)
	Width	Length	Height					
DPKC 2096	25	96	36	20	17	20 1/2	18 1/2	20
DPKC 20108	25	108	36	20	17	20 1/2	24 1/2	26
DPKC 20120	25	120	36	20	17	20 1/2	30 1/2	32
DPKC 20132	25	132	36	20	17	20 1/2	36 1/2	38
DPKC 20144	25	144	36	20	17	20 1/2	42 1/2	44
DPKC 20156	25	156	36	20	17	20 1/2	48 1/2	50
DPKC 20168	25	168	36	20	17	20 1/2	54 1/2	56



GAS IS YOUR QUICK, CLEAN, ECONOMICAL SERVANT

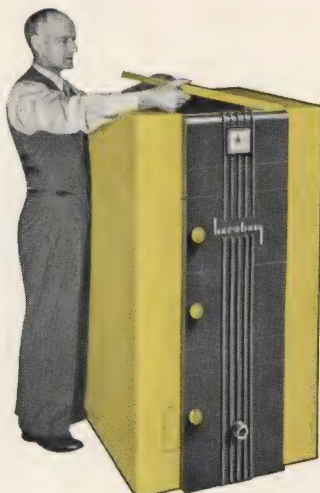
Magic Chef ranges are products of the American Stove Company. Offices in principal cities. For the name of the nearest dealer handling Whitehead Work-Saving Kitchens, the Unacrat and Duocrat, write:

THE INTERNATIONAL NICKEL COMPANY, INC.
67 WALL STREET
NEW YORK, N. Y.



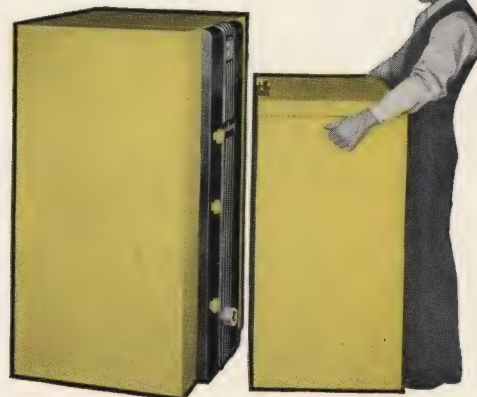
EASY TO PUT ON JACKET

The jacket has the sides and part of the front and top all in one piece. No trick to set up.



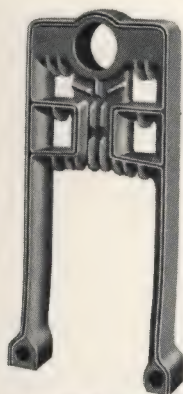
COMPLETING THE JACKET

With sides and back on, then you drop on the top and the jacket job's done.



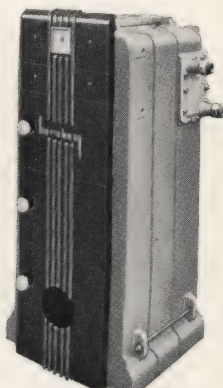
OPTIONAL JACKET EXTENSION

Comes with or without the jacket extension or front porch, for enclosing the oil burner. Most folks say they want it with.



COMBINED SECTION AND BASE

The section legs and base are all in one piece giving a water surrounded base.



SHIPPED SET UP

It comes to the job with sections all set up, sealed, and Taco hot water heater in place. Everything ready for at once connecting up the piping.



THE TANKLESS HEATER

Here you see the Tankless hot water supply heater being put in place at the factory before shipment. It's the only small cast iron boiler made that has a Tankless heater.

It Stings The Fuel Bills

This Oil Burning Junior Yello-Jacket, Small House Boiler

Takes Only 20 x 26 Inches Floor Space
Is Only 51 Inches High

Steam Capacity of 360 Ft. Water 580 Ft.

MAKE no mistake. This is not a large boiler squeezed down to a small size, which is all most small house boilers actually are.

This Junior Yello-Jacket, although it incorporates all the fuel stinging features of its Senior, the regular Burnham Yello-Jacket, it is a differently constructed and differently proportioned boiler in every way.

The Senior has a separate base and is assembled on the job. But the Junior has no separate base. It's a direct part of the boiler. The Junior comes to the job, all assembled and sealed, ready to at once connect up the piping. Saves set up costs.

It's the only small cast iron house boiler that it's optional whether it comes equipped with a Tankless Taco or a storage type heater for supplying hot water for bath and kitchen.

Its tailor-made jacket of gleaming dandelion yellow and black is most attractive. Has an optional removable jacket extension for covering the oil burner.

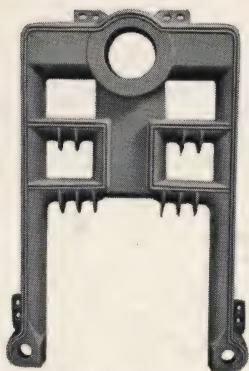
It seems incredible that a boiler that takes up a floor space of only 20 x 26 inches and is only 51 high can take care of 360 feet of steam radiation; or 580 hot water. It does it and stings the fuel bill besides.

IRVINGTON
N. Y.

Burnham Boiler Corporation

Representatives in all Principal Cities of the U. S. and Canada

ZANESVILLE
OHIO



Yello-Jacket Section, showing how the combustion chamber, where the most effective heating surfaces are, is not only the part directly over the fire, but extends through the center to top of boiler. The fins give added effectiveness.

Burnham Yello-Jacket

(The Senior)

AN ALL-FUEL BOILER
FOR LARGER HOMES

THIS Yello-Jacket is the original fuel stinger. It burns with equal economy, coal, gas, or oil. Has the tailor made dandelion yellow and black jacket. The extension for covering an oil burner is optional.

Has either a biltin Taco Tankless or storage heater.

Made in 7 capacity sizes, ranging from 325 to 775 ft. for steam; and from 520 to 1,240 ft. for hot water.



Yello-Jacket Boiler, showing jacket extension in place, over an oil burner. No extension is used for gas or coal. The extension is optional.

Burnham Slenderized Radiators

Take Up 40% Less Room
Heat 40% Quicker

OVER 2,000 miles of these wonderful, space-conserving, attractively designed radiators have been sold. That 2,000 miles is farther than from New York to Denver.

So small are they, that you can recess them under the windows between studs and not extend in the least beyond the wall. Even when free standing, they only take up a space as deep as your forefinger is long.

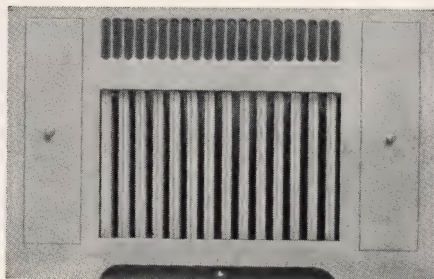


The four tube slenderized section, measuring just 4-7/16" wide.

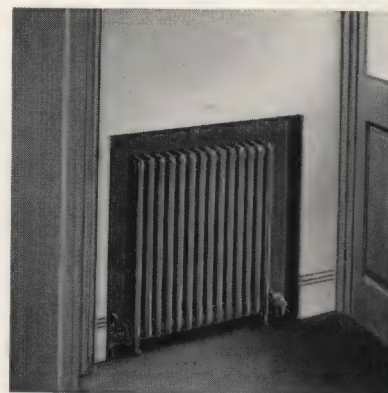
Their design is chaste. One that will fit in any kind of a room. Their finish is particularly smooth. Small as they are, these slenderized radiators do a heating job equivalent to the old type radiators that are 40% larger. The slenderized are made in 3, 4, 5, and 6 tubes. 3 tube is 3 1/4" wide. The four is 4-7/16". The five is 5-11/16". The six is 6-15/16".



Note how inconspicuous, and how little room one of these slenderized radiators takes. When painted to agree with wood-work or wall, they are scarcely seen.



Used with this panel front, is one way of recessing these radiators. The radiator itself forms the main grille. You get both radiant and convected heat just the same as if radiator were standing in room.



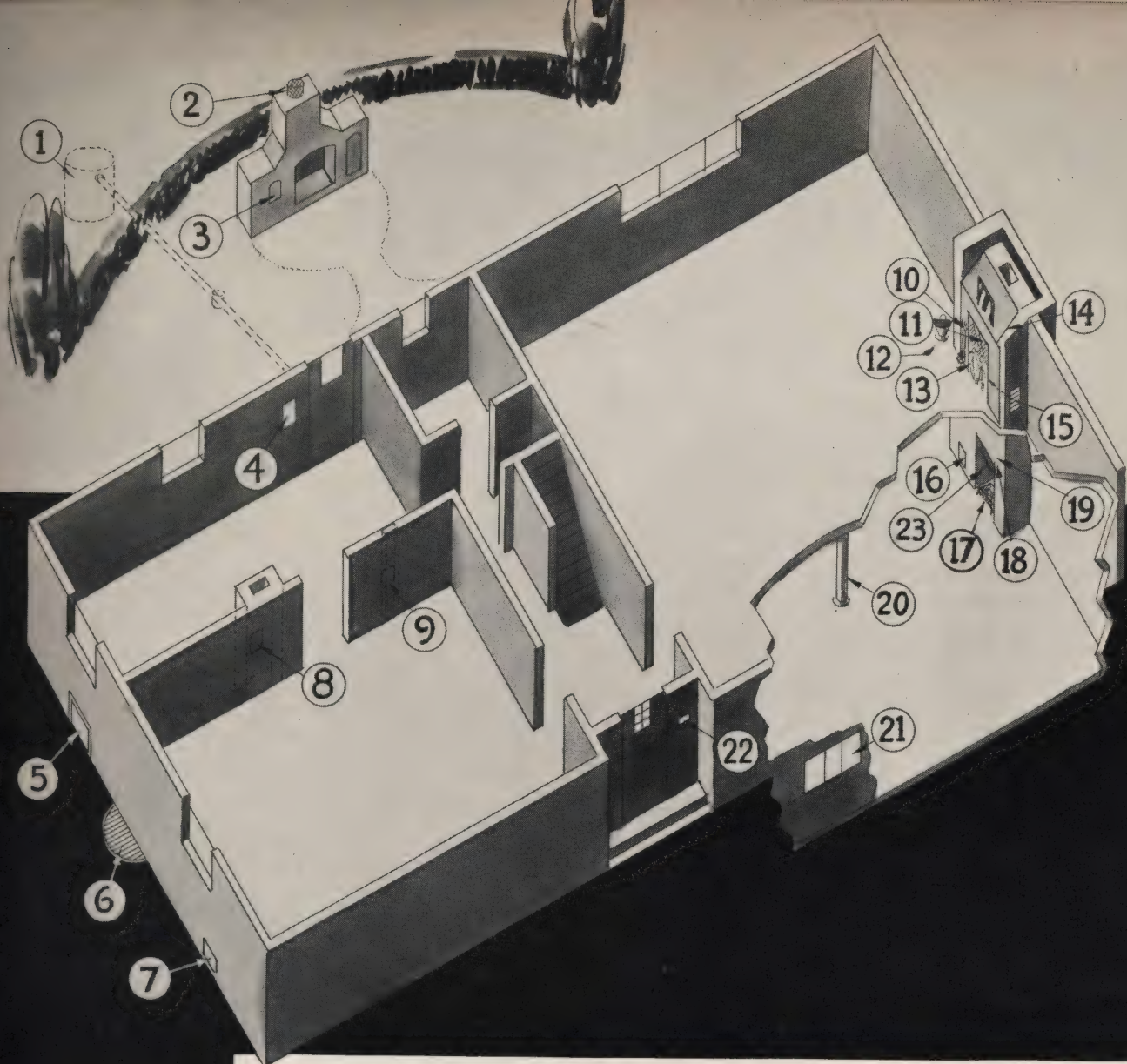
As often used in halls. Just a plain recess and no front. Had both the inside of this recess and the radiator itself been finished same color as wall, you would hardly notice it.

IRVINGTON
N. Y.

Burnham Boiler Corporation

Representatives in all Principal Cities of the U. S. and Canada

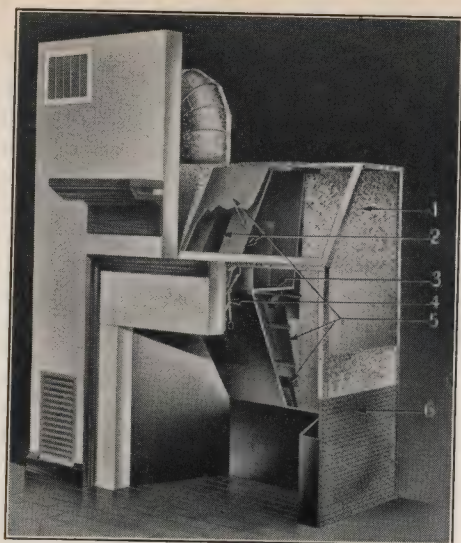
ZANESVILLE
OHIO



- | | |
|---|------------------------------------|
| 1 Donley Septic Tank (with Donley Grease Trap in house sewer) | 12 Donley Fuel Container |
| 2 Donley Spark Screen | 13 Donley Andirons |
| 3 Donley Dutch Oven Door | 14 Donley Heatsaver Fireplace Unit |
| 4 Donley Package Receiver | 15 Donley Ash Dump |
| 5 Donley Coal Chute | 16 Donley Ash-pit Door |
| 6 Donley Area Wall with Grating | 17 Donley Fire Basket |
| 7 Donley Ventilator | 18 Donley Steel Angle |
| 8 Donley Incinerator | 19 Donley Fireplace Damper |
| 9 Donley Laundry Chute Door | 20 Donley Basement Stanchion |
| 10 Donley Fire Set | 21 Donley Basement Window |
| 11 Donley Fire Screen | 22 Donley Mail Receiver |
| | 23 Donley Fireplace Crane |

DONLEY DEVICES *Complete the Home*

• • • • A message of comfort, convenience and cheer to folks who are planning homes, from THE DONLEY BROTHERS CO.
13954 MILES AVENUE, CLEVELAND, OHIO • • • • •



Cutaway View Shows Reasons Heatsaver Gives More HEAT

Note (1) how large air chamber encloses ALL heated surfaces, including smoke chamber. (2) Heat ducts that equalize the flow. (3) Heavy steel smoke shelf. (4) Built-in Donley Damper, poker controlled. (5) Convection sheets that keep outer shell cool and add to heat delivery. (6) Large area cold air intake that permits freedom in placing of grilles.

Efficient, Adaptable HEATSAVER Unit Heads Complete Donley Fireplace Line

Many beautiful fireplaces throughout America are as efficient as they are beautiful because built around Donley Heatsaver Units that add uniform, circulated heat to the glow of the open flame.

As a MAIN HEATING PLANT it provides year-around comfort for the small home or cottage, since heat is readily piped to adjoining rooms or rooms above.

As an AUXILIARY it saves firing the central plant during chilly months of spring and fall and gives welcome extra warmth in the coldest weather.

UPPER OUTLETS. Outer shell is cut as desired for pipes to serve outlets in locations selected.

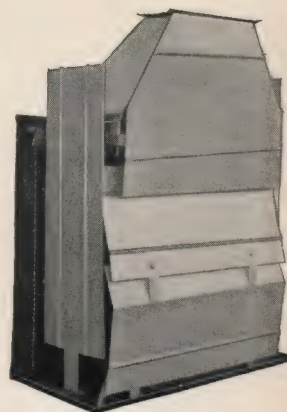
CENTRAL OUTLET draws heat from ducts through smoke shelf, tapping hottest part of flame. If central outlet is omitted, this heat may be diverted to upper outlets.

MORE HEAT results from full utilization of upper heated surfaces, 46% of total heated surface being above level of smoke shelf.

B. T. U. DELIVERY under test conditions varies from 12,900 units per hour for 26" size to 39,300 units per hour for 60 inch size.

ADAPTABLE TO MANY LAYOUTS—Heatsaver literature, sent on request shows a great variety.

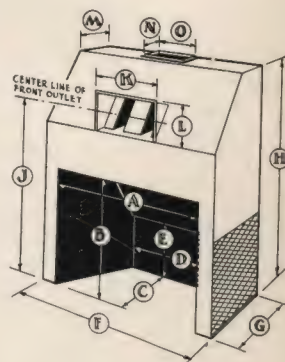
DESIGNING SERVICE—Assistance gladly rendered in solving problems of effective installation.



Rear of Heatsaver With Casing Removed Showing System of Convection Sheets

DIMENSIONS OF HEATSAVER UNITS

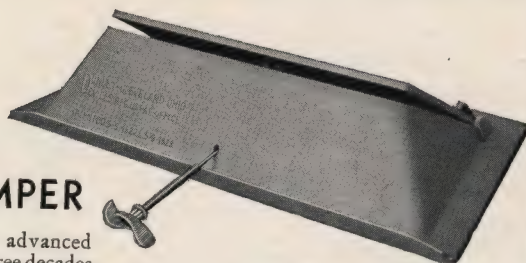
Heat-saver No.	Opening Dimensions, in Inches						Casing Dimensions, in Inches									Shipping Weight
	A	B	C	D	E	F	G	H	J	K	L	M	N	O		
26	26	24	17	11 $\frac{3}{4}$	14	33	21	48	40 $\frac{1}{2}$	8	12	11 $\frac{3}{4}$	7 $\frac{1}{4}$	7 $\frac{1}{4}$		280
30	30	28	17	15 $\frac{1}{8}$	14	38	21	55	45 $\frac{1}{2}$	16	12	11 $\frac{3}{4}$	7 $\frac{1}{4}$	11 $\frac{1}{4}$		320
34	34	28	17	20	14	42	21	55	45 $\frac{1}{2}$	16	12	11 $\frac{3}{4}$	7 $\frac{1}{4}$	11 $\frac{1}{4}$		355
42	42	30	18	27	14	50	22	62	47 $\frac{1}{2}$	16	12	16	11 $\frac{3}{4}$	11 $\frac{1}{4}$		450
48	48	30	18	33	14	58	22	62	47 $\frac{1}{2}$	25 $\frac{1}{2}$	12	16	11 $\frac{3}{4}$	11 $\frac{1}{4}$		510
54	54	34	20	37 $\frac{3}{8}$	16	66	26	80	56	25 $\frac{1}{2}$	12	16	11 $\frac{3}{4}$	15 $\frac{3}{8}$		800
60	60	34	20	43 $\frac{3}{8}$	16	72	26	80	56	25 $\frac{1}{2}$	12	16	11 $\frac{3}{4}$	15 $\frac{3}{8}$		930



Complete Plans
and Directions for
Fireplace Building
Sent With Every

DONLEY DAMPER

A device which has greatly advanced American fireplace building in three decades of manufacture. Upturned front flange and narrow throat assist important forward position of damper, giving room for sloping back and smoke shelf at rear. Improves draft and heat delivery while checking down-draft. Splayed sides fit ideal hearth plan. Substantially made of finest grade



cast iron. Every damper sent fully assembled and crated with fireplace plans attached. Optional key or poker control. Valve plate removable in case of stoppage above. Made in sizes for following widths of opening—24", 30", 33", 36", 42", 48", 54", 60", 72", 84" and 96".

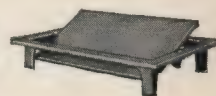
Donley Ash Pit Door

Close fitting substantial doors that serve for ash-pit or for clean-out at base of furnace flue, or wherever desired. Made of cast iron, except as noted, in the following residential sizes, first dimensions being height: 6" x 8" steel slide type, 7" x 9", 8" x 8", 8" x 10", 10" x 12", 12" x 15".

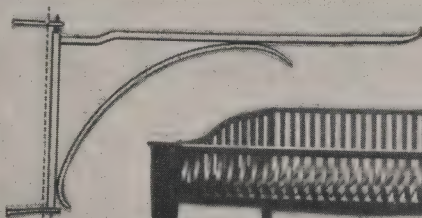


Donley Ash Dump

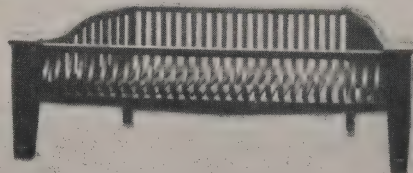
promotes easy disposal of ashes from the fireplace hearth. Sturdy construction, deep lugs for secure anchorage and easy action make it an important feature of the Successful Fireplace. No. 58 is for hearth opening of 5" x 8", No. 70 for opening 7" x 10".



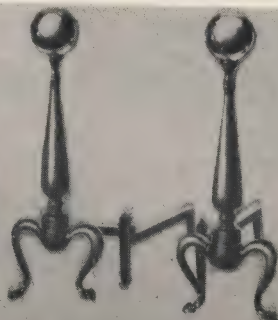
DUTCH OVEN DOOR



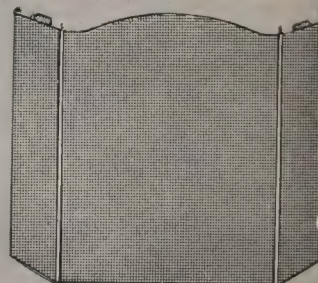
CRANE



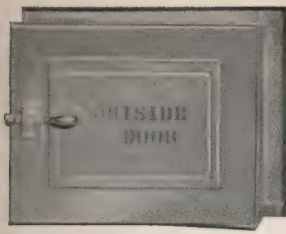
FIRE BASKET



ANDIRONS



FIRE SCREENS



DONLEY PACKAGE RECEIVERS

Preserve Privacy

No need to jump and run when deliveries arrive. No intrusion, no drafts, no muddy feet. Outer door of Receiver locks automatically when closed by delivery man. When inner door is opened to remove package, outer door lock is automatically released. Automatic feature can be disconnected at will. Donley Package Receivers are substantial, thief proof—insulated from outer chill and ventilated from within to assure room temperature. Note—Nos. 3 and 4 in table below are without automatic locking feature.



No.	Body		Over All Front to Back	Inside Frame	Facing Inside Door, With Hinge	Shipping Weight
	Width	Height				
1	13 $\frac{3}{4}$ "	11 $\frac{1}{2}$ "	9"	16 $\frac{3}{4}$ x14"	On Left	20 lbs.
2	13 $\frac{3}{4}$ "	11 $\frac{1}{2}$ "	9"	16 $\frac{3}{4}$ x14"	On Right	20 "
3	13 $\frac{3}{4}$ "	11 $\frac{1}{2}$ "	6"	16 $\frac{3}{4}$ x14"	Reversible	16 "
4	13 $\frac{3}{4}$ "	11 $\frac{1}{2}$ "	9"	16 $\frac{3}{4}$ x14"	Reversible	20 "

Note: Return of flange on inside, $\frac{3}{4}$ ". Nos. 1 and 2 have automatic lock; Nos. 3 and 4 no automatic lock.

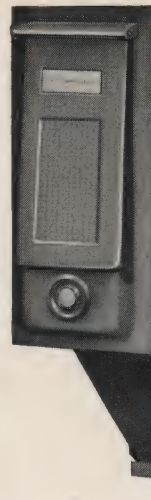
DONLEY COAL CHUTES

Protect foundation and siding, keep out burglars and prevent nuisance at the time of coal deliveries with a sturdy, convenient Donley Coal Chute. Door is unlatched without entering coal bin and latches automatically when coal man closes it. Frame of malleable iron or copper steel as indicated in table below. Door steel, or with mesh glass lights as indicated in table. Height of all models shown is 17 inches, width 24 inches. Wall depth 8 inches on Nos. 19, 29, 48 and 39. Depth of 12 inches on Nos. 113, 213 and 313.



Order by No.	Description		Bottom of Chute	Shipping Weight	Hoppers
	Door	Frame			
19	Solid Steel	Copper Steel	Straight	31 lbs.	None
29	Solid Steel	Malleable	"	37 "	"
48	Clear Glass, 3 Lts.	Copper Steel	"	40 "	"
39	Clear Glass, 3 Lts.	Malleable	"	50 "	"
113	Solid Steel	Copper Steel	Slanting	37 "	Optional
213	Solid Steel	Malleable	"	43 "	"
313	Clear Glass, 3 Lts.	Malleable	"	55 "	"

DONLEY MAIL RECEIVER



Among the several styles of Donley Mail Receivers, this No. 9-F (and 9-B) command preference, on account of their simple, attractive design, capacity for magazines and small packages and convenience of installation. Outer door and frame are of pressed bronze. Inner door is finished to match interior. Weather proof card holder and well constructed bell button switch with lead wires are furnished extra when ordered with any Donley Mail Receiver. Chute telescopes to fit wall thickness. No. 9-F takes walls from 5" to 9" thick and No. 9-B walls 9" to 14". Housewives have no worry about mail delivery when the home is equipped with a Donley Mail Receiver.



DONLEY BASEMENT WINDOWS

Window shown is Top Opening type (There is also a type that opens at the bottom). This model offers superior protection against unlawful entry, even when open. When closed it is secured with long lever, close fitting lock. Sash and frame are made from heavy ($\frac{1}{8}$ " thick) steel angles, welded. Panes rest against cork strips and are held in place by "jiffy" clips or glazing mastic. Clips are of spring steel and hold glass securely, offering convenience when glass must be replaced. Maximum light and long service are assured in lighting the many activities that find place in a well planned basement.

TOP OPENING TYPE

No.	Glass Size	Masonry Openings	Overall Dimensions	Ship. Wt.
11	2 light—10x12"	22 $\frac{3}{4}$ x15"	23 $\frac{3}{4}$ x15 $\frac{1}{2}$ "	14 lbs.
13	2 light—14x20"	30 $\frac{3}{4}$ x23"	31 $\frac{3}{4}$ x23 $\frac{1}{2}$ "	21 "
14	3 light—10x12"	33 $\frac{3}{4}$ x15"	34 $\frac{3}{4}$ x15 $\frac{1}{2}$ "	19 "
16	3 light—10x16"	33 $\frac{3}{4}$ x19"	34 $\frac{3}{4}$ x19 $\frac{1}{2}$ "	22 "
17	3 light—10x20"	33 $\frac{3}{4}$ x23"	34 $\frac{3}{4}$ x23 $\frac{1}{2}$ "	23 "
18	3 light—12x18"	39 $\frac{3}{4}$ x21"	40 $\frac{3}{4}$ x21 $\frac{1}{2}$ "	24 "

BOTTOM OPENING TYPE

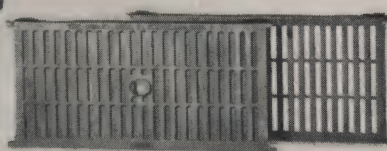
No.	Glass Size	Masonry Openings	Overall Dimensions	Ship. Wt.
1	2 light—10x12"	22 $\frac{3}{4}$ x15"	23 $\frac{3}{4}$ x15 $\frac{1}{2}$ "	14 lbs.
3	2 light—14x20"	30 $\frac{3}{4}$ x23"	31 $\frac{3}{4}$ x23 $\frac{1}{2}$ "	21 "
4	3 light—10x12"	33 $\frac{3}{4}$ x15"	34 $\frac{3}{4}$ x15 $\frac{1}{2}$ "	19 "
5	3 light—10x14"	33 $\frac{3}{4}$ x17"	34 $\frac{3}{4}$ x17 $\frac{1}{2}$ "	21 "
6	3 light—10x16"	33 $\frac{3}{4}$ x19"	34 $\frac{3}{4}$ x19 $\frac{1}{2}$ "	22 "
7	3 light—10x20"	33 $\frac{3}{4}$ x23"	34 $\frac{3}{4}$ x23 $\frac{1}{2}$ "	23 "
8	3 light—12x18"	39 $\frac{3}{4}$ x21"	40 $\frac{3}{4}$ x21 $\frac{1}{2}$ "	24 "



UNDERGROUND
GARBAGE RECEIVER



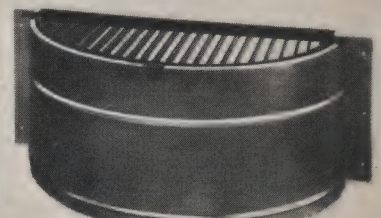
SEPTIC TANK



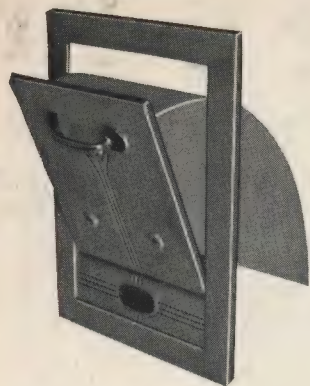
VENTILATORS



LAUNDRY CHUTE DOOR



AREA WALL AND
GRATING



YOUR DONLEY INCINERATOR

A Big help toward clean, wholesome living

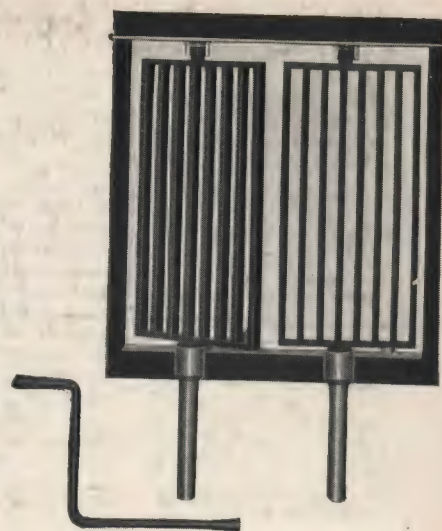
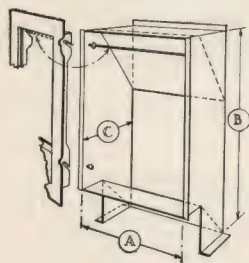
Sanitation and neatness rule the home scene when garbage and trash find their way promptly through the ever ready door of your Donley Incinerator.

Your Incinerator consists of masonry fire chamber in the basement and a stack that ascends above the roof, besides metal parts which Donley furnishes. These include Receiving Door, Fire Door, Grates, Grate Frame, Ash Door, Roof Irons, and Chimney Screen. Many home owners like to have Receiving Doors on upper stories, as well as in the kitchen, since trash and dirt originate upstairs as well as below.

Donley equipment is provided for four sizes of home incinerator, fitting every home from cottage to mansion. Five larger sizes are made for other types of building.

Operation is simple. Receiving doors work easily and quietly, excluding smoke and fumes when burning is in progress. Burning usually involves simply igniting the accumulation once or twice a week. No added fuel is usually necessary. Garbage dries rapidly. Papers and wrapping aid the blaze. If unusually moist, a gas flame helps and gas burner will be shipped at small extra cost. Grates are shaken with long lever and ashes removed as desired.

Write for complete information or consult the Donley Catalog for dimensions and installation data. Full directions for installation are sent with every Incinerator shipment.



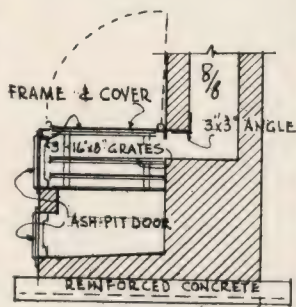
Strong, lasting Donley Grates are supported by a steel frame resting on course of brick work. Grate bearings are of steel. In case of replacement or repairs, grates can be lifted out through the fire door, saving the necessity of tearing out brick work.

Outdoor Fireplaces Work Better When Built Around DONLEY OUTDOOR UNITS

This picture shows the No. 20 Donley Unit for an outdoor cooking fireplace. It provides frame, grates, cooking top, door or doors for an ideal outdoor cooking range—solving the question of true alignment for the grates with angle supports. It lends itself to a variety of exterior treatments and can be used in combination with Donley Duplex Steak Grill, No. 40, with Dutch Oven or whatever assembly is preferred. It protects the front of the stack from smudge, since the top, when lifted, rests against the front of the masonry. The sketch below shows the No. 20B assembly, in which an additional door is employed for deep ash-pit below.



Donley No. 20 Outdoor Cooking Range Unit

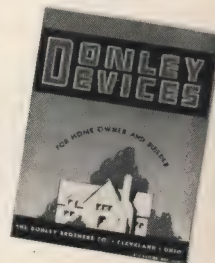


Installation No. 20-B

There are other Donley aids to outdoor fireplace building, all illustrated in the bulletin, Successful Outdoor Fireplaces, which will help you to avoid common pitfalls in outdoor fireplace building. Two portable units are included. Bulletin mailed for 10 cents.

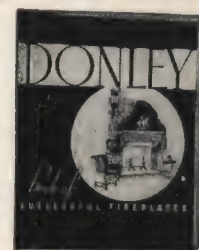
The Donley Catalog

contains full information about every Donley home convenience and construction specialty. Keep a copy on hand for accurate data, pictures and installation directions—forty pages, 8½ x 11. Free to contractors.



The Donley Book of Successful Fireplaces

Complete instructions, suggested treatments, hundreds of illustrations, what to do, what *not* to do, unusual materials, outdoor fireplaces, a fireplace on every floor. Send 25c (in Canada 35c).



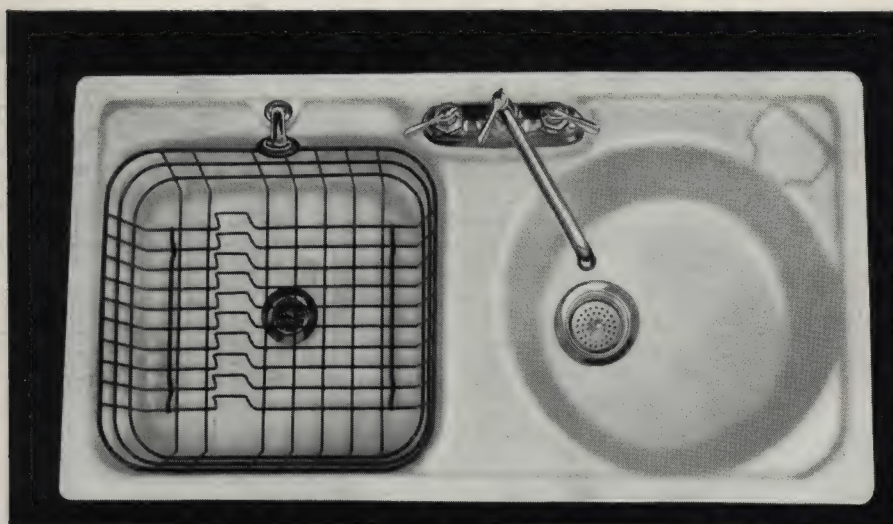
Outdoor Fireplaces

Plans, ideas, materials and equipment for building the outdoor fireplace. Explains three types, tells how, why, and suggests where. Eight pages, 8½ x 11. 10c each.



THE DONLEY BROTHERS CO.

13954 MILES AVENUE • CLEVELAND, OHIO



EBCO

Dishwashing TOP SINK

WITH MIXING
FAUCET AND SPRAY
MOUNTED ON
INTEGRAL
BACK-LEDGE



In Two Sizes

TS2-3820 38 x 20" ROUND WASHING COMPARTMENT
TS2-3220 32 x 20" ROUND WASHING COMPARTMENT

The newest addition to EBCO'S complete line of modern, work-saving sinks is this two-compartment model with integrally mounted fixtures. The swing-spout mixing faucet and hose spray fixture are compactly and conveniently assembled on the new flat ledge at the back of the sink, which also contains a recessed soap dish. This advanced sink also features the large, easily-cleaned dual strainer and convenient, rubber-dipped draining basket with which all EBCO Sinks are equipped. A watertight seal between the cabinet-top material and the sink is assured, as the rim is perfectly flat and straight. Available in White, Green, or Ivory acid-resisting porcelain enamel.

Specifications

TS2-3820 and TS2-3220

SINK —

Genuine gray cast iron, finished in EbcO acid-resisting porcelain enamel.

COLORS—White, ivory, or green.



DIMENSIONS —

TS23820—38 x 20". Dishpan 16" in diameter—7 $\frac{3}{4}$ " deep.
Draining compartment 16 x 16 $\frac{3}{4}$ "—5" deep.
TS2-3220—32 x 20". Dishpan 14 $\frac{1}{4}$ " in diameter—17 $\frac{3}{4}$ " deep.
Draining compartment 13 $\frac{1}{2}$ " x 14 $\frac{3}{4}$ " x 5" deep.

EBCO FAUCET —

No. 135 for TS2-3820 or TS2-3220 — Hose spray also for either model. Red brass, chrome plated mixing faucet with swing spout that reaches both compartments of sink, and with a diverter valve for transferring water from swing spout through hose to spray fixture, which is mounted on the back-ledge at the center of the draining compartment, for greatest convenience.

EBCO WASTE FITTING

No. 117. For either model sink. Dual strainer, with large lift-out crumb cup and metal gravity plug in dishwashing compartment. Removable strainer in draining compartment. All parts brass, chrome-plated.

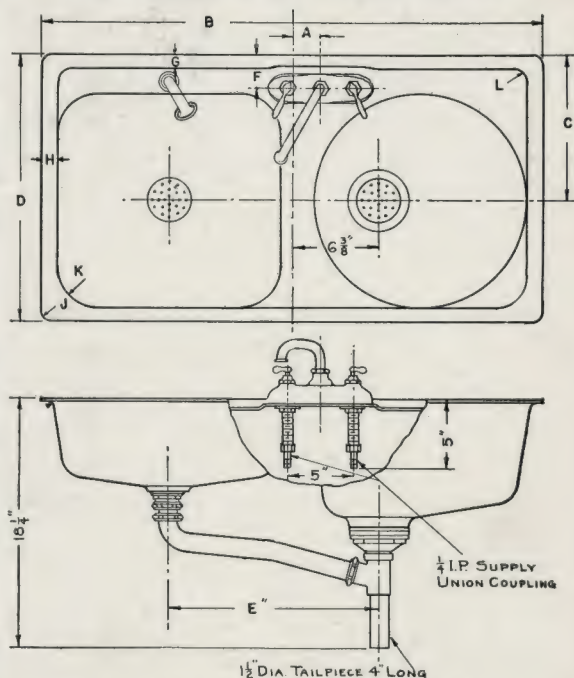
DRAINING BASKET —

No. 109 for TS2-3820—Heavy-gauge wire—rubber dipped. Color—black. Fits accurately into rectangular compartment of sink.
No. 110 for TS2-3220—Heavy-gauge wire—rubber dipped. Color—black. Fits accurately into rectangular compartment of sink.

FOR USE WITH ELECTRIC GARBAGE DISPOSAL UNITS

On special order, the square compartment of this sink can be provided with a large drain outlet to accommodate electric garbage disposal units. For this use, specify models TS2-3820-D or TS2-3220-D. When this model is specified, the twin waste connection is omitted and No. 116 waste fitting for Round Bowl only is furnished instead.

ROUGHING-IN DIMENSIONS



MODELS	A	B	C	D	E	F	G	H	J	K	L
TS2-3820	11 $\frac{1}{2}$	38	12	20	15 $\frac{1}{2}$	2 $\frac{1}{2}$	18	14	4	3	1
TS2-3220	11 $\frac{1}{2}$	32	11 $\frac{1}{2}$	20	15 $\frac{1}{2}$	2 $\frac{1}{2}$	18	14	4	2	2

ROUGH-IN DIMENSIONS

The Emblem **EBCO** of Quality

THE EBCO MANUFACTURING CO.
COLUMBUS OHIO

Printed in U.S.A.

EBCO

Single Bowl

TOP SINK

WITH SWING-SPOUT
MIXING FAUCET ON
THE BACK-LEDGE

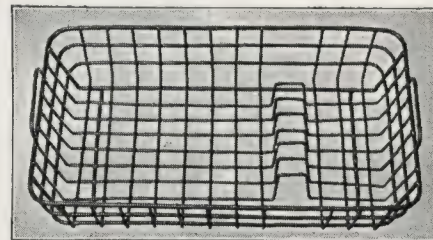


In Two Sizes

MODEL TS-2418 — 24 x 18"

MODEL TS-2820 — 28 x 20"

Striking simplicity marks the attractive design of this efficient EBCO Single-Bowl Sink. With the neat, extra long, swinging faucet mounted on the sink's wide, level back-ledge, it is unsurpassed for utility and convenience. Its large dual strainer waste assembly contains sediment-catching crumb cup which makes the sink easy to keep clean and sanitary. Dishwashing is greatly facilitated by the specially designed draining basket of heavy, rubber-dipped wire. Integral soap dishes are recessed on either side of the faucet unit. The sink is of heavy cast-iron, gleamingly finished in white, green, or ivory, acid-resisting porcelain enamel. Fixtures are of heavily-chromed brass. Installation is simple and economical, as the back-ledge arrangement of the faucet assembly does away with in-the-wall piping. The ideal sink for small homes and apartments!



No. 108 Drain Basket

This specially designed, rectangular wire basket fits snugly into either end of the EBCO Single Bowl Sink described on this page. It is strongly constructed of heavy-gauge wire and thickly coated with rubber to prevent chipping and breaking of dishes.

Specifications

TS-2418 and TS-2820

SINK —

Genuine gray cast iron, finished in EbcO acid-resisting porcelain enamel. COLORS—White, ivory, or green.



DIMENSIONS —

TS-2418—Length 24", width 18". Depth of bowl 7½", width of back-ledge, 3".

TS-2820—Length 28", width 20". Depth of bowl 7½", width of back-ledge, 3".

EBCO FAUCET —

No. 125 for either model sink. Deck-type with swing spout. Extra long supply tailpieces with union couplings. Finished in bright chrome plate.

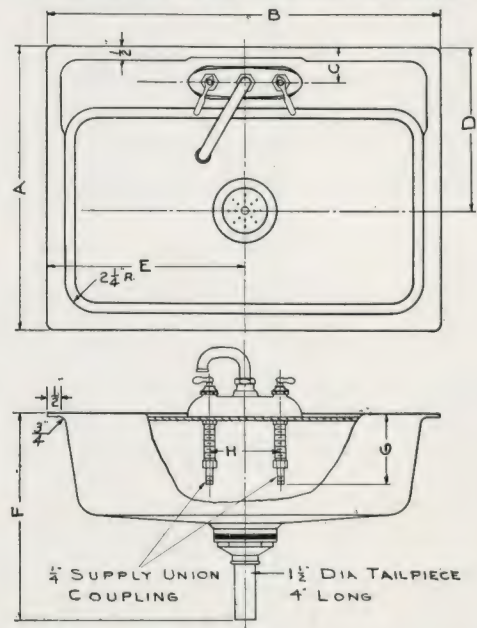
EBCO WASTE FITTING —

No. 116 for either model sink. 3½" dual strainer waste assembly with 1½" x 4" tailpiece. Brass, finished in chrome plate.

DRAINING BASKET —

No. 108 for either model sink. Rubber dipped. Color — black. Size 20½ x 11½ x 4¼".

ROUGHING-IN DIMENSIONS



MODELS	A	B	C	D	E	F	G	H
TS 2418	18	24	2 7/16	10 1/2	12	14 3/8	4 3/8	5"
TS 2820	20	28	2 7/16	11 1/2	14	14 3/8	4 3/8	5"

ROUGH-IN DIMENSIONS

The Emblem **EBCO** of Quality

THE EBCO MANUFACTURING CO.
COLUMBUS OHIO

Printed in U.S.A.

Hotpoint
Electric
HOME APPLIANCES



RANGES

REFRIGERATORS

WATER HEATERS

**KITCHEN SANITATION
EQUIPMENT**

**HOME LAUNDRY
EQUIPMENT**

COMMERCIAL EQUIPMENT

EDISON GENERAL ELECTRIC APPLIANCE CO., INC.

5600 WEST TAYLOR STREET ★ CHICAGO, ILLINOIS

WHY ELECTRIC KITCHEN EQUIPMENT?

ECONOMY—The specification of major electrical appliances and of all-electric kitchens does three big things. It provides modern care-free service; it secures low electric rates; and it adds to the value and desirability of property.

Laboratory research has refined every element of modern electrical equipment to the point where waste is reduced to a positive minimum. The low electrical rate secured by the all-electric home makes an electric range the logical choice for economical cookery.

EFFICIENCY—Electric heating and power units have been developed to the point of extreme efficiency. The heat

or power is concentrated to do the full duty . . . *but no more*. There is no costly wastage of power or heat.

CLEANLINESS—No flame, no soot, no dust or grime connected with electrical appliances. Walls, ceilings and cooking utensils stay clean. The smooth, enamel surfaces of the appliances need only a damp cloth to keep them sparkling and shining.

SPEED—Present-day electrical appliances perform their heating jobs with a speed equal to or *in excess* of other methods. The complete safety of the electrical method is uncontested.

KITCHEN SANITATION

Hotpoint manufactures a complete line of home dishwashers, dishwasher-sinks and kitchen waste exits. These are not shown in this booklet, but full information can be secured from the nearest distributor (see back cover) or from the home office in Chicago.

WHY Hotpoint KITCHEN APPLIANCES?

They're Laboratory Products—Hotpoint is the world's oldest and largest manufacturers of electric ranges. Hotpoint is also the world's largest manufacturers of electric water heaters, leading at all times in technical improvements. Years of scientific laboratory tests stand behind every Hotpoint product.

They're Efficient—The Calrod heating unit in our ranges, water heaters and ironers is fast, economical and extremely durable. The Thriftmaster sealed unit in our refrigerators is permanently oil-cooled, silent, and ultra-efficient.

They're Guaranteed—All Hotpoint equipment is guaranteed against mechanical and electrical defects for one year, providing it is properly installed. The refrigerator mechanism has an additional four years' warranty, pro-

viding for replacement or repair for any defect from any cause whatsoever.

They're Safe—Hotpoint electrical appliances have no flames and no fumes. They are fire- and explosion-proof. All are approved by the Underwriters' Laboratories.

They're Standardized—Hotpoint appliances allow for ensemble planning because they are standardized as to design and size. Remember—*Standardization reduces installation costs*.

A Complete Line—In addition to choice of size in all domestic major electrical appliances, Hotpoint manufactures a complete line of heavy duty products for commercial installations in restaurants, hotels, bakeries, institutions, etc. (See Pages 10-11.)



COOPERATION WITH ARCHITECTS

Kitchen Planning Service—(See special note on Commercial Equipment, Page 10.) The Edison General Electric Appliance Company maintains an experienced kitchen planning staff of expert technicians, ready at all times to advise architects without any obligation. Whether the problem is to determine basic requirements for the smallest apartment kitchen unit or to design and lay out a kitchen installation for a metropolitan hotel or ocean liner, Hotpoint's engineers and planners are equipped to find the most efficient solution. At all times we base our recommendations on actual requirements. At no time do we attempt to overload a layout for the purpose of increasing a sale.

Nationwide Service—Hotpoint equipment is serviced by nationwide facilities, with an extremely liberal service policy. Your correspondence is invited.

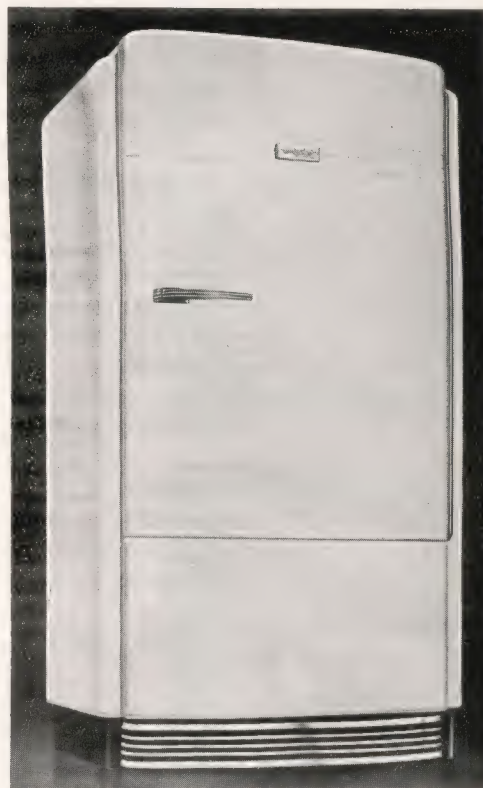
ELECTRIC REFRIGERATORS

The product of scientific laboratory development, Hotpoint refrigerators are dependable, long-life electrical appliances. Economical in operation, distinctively modern in design, they include a number of engineering and equipment features not found in other high-grade electric refrigerators (see below).

CHOICE OF SIZES—Hotpoint offers a complete line, in capacities ranging from 3 cu. ft. to 16.1 cu. ft.—a size to accommodate the smallest apartment or largest residence.

THRIFTMASTER—Time-tried and tested, the vacuum-sealed Thriftmaster power unit has proved itself one of the most efficient refrigerating units ever produced. Entire mechanism sealed in steel, free from effects of air or moisture. Moving parts finished and gauged to work smoothly and accurately—214 routine tests insure mechanical perfection. Silent in operation, the Thriftmaster is served by sealed forced-feed lubrication, insuring permanent oiling to all bearing surfaces. No belts, no pulleys to ever require servicing.

SPEED FREEZER—This stainless steel unit freezes ice cubes in less than one hour. Keeps food fresh and safe in frosty air held at constant chill by Hotpoint's precisely balanced temperature control.



TYPICAL FEATURES

ALL-STEEL CABINET—No wood to warp, rot, or cause odors.

MODERN FINISH—Exterior finish is durable, high-lustre white, Calgloss baked enamel. This finish is chip-proof and rust-proof. Models also available completely finished in vitreous enamel.

TEMPERATURE CONTROL—Wide range of temperature, plus defrost control—extremely simple.

HI-HUMIDITY COMPARTMENT—For storing fruits and vegetables. Easily adjusted to provide just the correct amount of humidity for different foods.

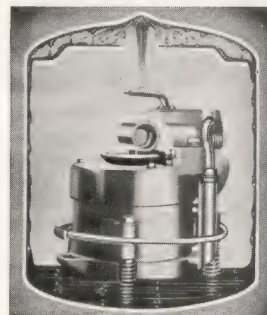
MODERN HARDWARE—Designed to harmonize with other Hotpoint appliances. Finger-touch door latch.

6-WAY COLD-STORAGE COMPARTMENT—Has six different arrangements for properly storing and preserving meat, fish, and fowl. Its Measured Humidity keeps all meats in prime condition.

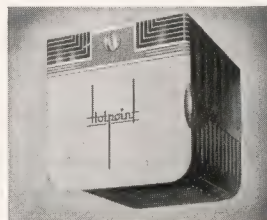
POP-ICE TRAYS—Convenience—Two ice cubes or trayful—no waste—quick and easy.

AUTOMATIC MOTOR GUARD—Protection against voltage surges.

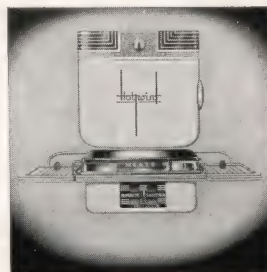
UNLOADER VALVE—Keeps motor free of load during starting and stopping.



Thriftmaster



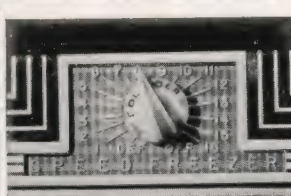
Speed Freezer



6-Way Cold Storage

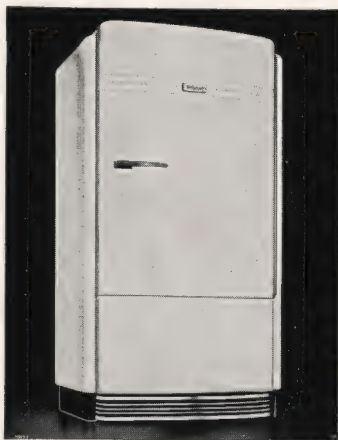


Hi-Humidity Compartment



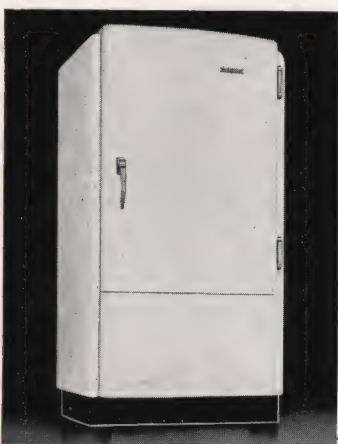
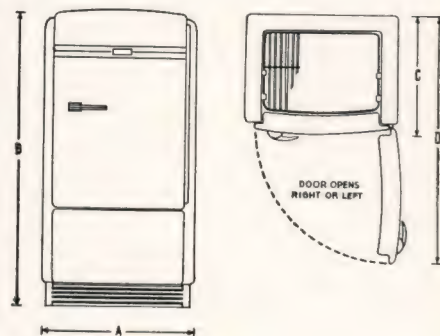
Temperature Control

ELECTRIC **Hotpoint** REFRIGERATORS



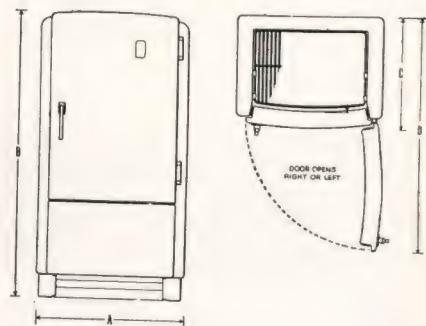
DELUXE AND IMPERIAL MODELS

These lines incorporate all of the latest convenience features in an all-steel cabinet. Powered by a vacuum-sealed mechanism, cooled by a stainless-steel freezing chamber. Baked Calgloss enamel over Bonderized steel with porcelain interior for the Deluxe Models. Finest porcelain, inside and out, in the Imperial Models. Quiet in operation, beautiful in appearance.



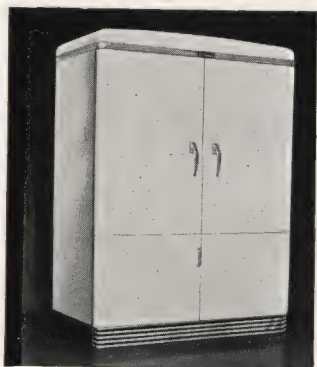
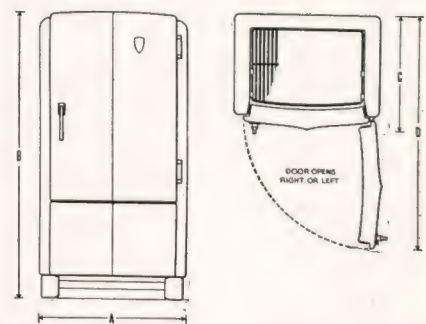
STANDARD MODELS

This line of three, five, and six cubic-foot capacity hasn't all of the convenience features found in the higher-priced lines but is powered with the same efficient mechanism and is all steel in construction. These rugged refrigerators will give the same good service as those at a higher price and are an unusual value for those seeking a lower priced appliance.



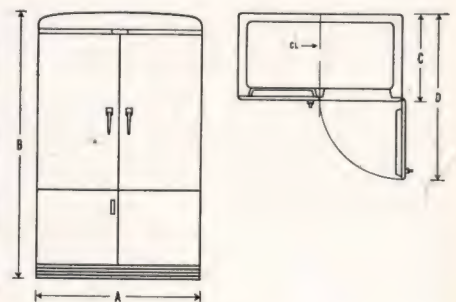
SPECIAL MODELS

For low-cost housing, Hotpoint makes this line of three, four, and six-foot models. All special line refrigerators have the regular Hotpoint mechanism, all-steel construction and are very handsome in appearance. No efficiency of operation has been sacrificed to achieve the low price at which these refrigerators sell.



IMPERIAL MODELS (Large Capacity)

Hotpoint's two large Imperial models at 12 and 16-foot capacity ideally provide for the occasional demand for a very spacious refrigerator of unusual appearance and appointment. They are equipped with every convenience feature. Finished in porcelain inside and out, with chromium trim. Large storage drawer provides additional storage space for pots and pans or foods not requiring refrigeration.



ELECTRIC **Hotpoint** REFRIGERATORS

DATA AND DIMENSIONS

DELUXE MODELS

Model	Exterior—Overall Dimensions, Inches				Capacity, Cu. Ft.	Shelf Area, Sq. Ft.	Approx. Shipping Weight, Lbs.	Thriftmaster Compressor (Horsepower)	
	A	B	C	D				60-50 Cycles	DC
Colonial 120EC5-40	27 1/4	53 11/16	26 11/16	47 1/4	5.02	10.6	305	1/8	1/6
Norman 120EC6-40	29 1/2	57 1/4	26 9/16	49 1/8	6.24	12.22	345	1/8	1/6
Tudor 120EC8-40	32 1/2	60 3/4	27 7/8	52 5/8	8.22	16.9	455	1/8	1/6

IMPERIAL MODELS

Norman 110ED6-40	29 1/2	57 1/4	26 9/16	49 1/8	6.24	12.22	385	1/8	1/6
Tudor 110ED8-40	32 1/2	60 3/4	27 7/8	52 5/8	8.22	16.9	480	1/8	1/6
Empire 110ED1-40	40	67 7/32	32 13/32	46 3/4	12.0	26.16	760	1/6	1/3
American 110ED2-40	49	67 7/32	32 13/32	51 1/4	16.07	32.16	885	1/6	1/3

STANDARD MODELS

Kitchenette 120EB3-40	23 3/4	36	23 1/4	45	2.73	6.64	210	1/8	1/6
Bungalow 120EB43	23 1/2	49 3/8	24 7/8	43 1/2	4.0	9.3	215	1/8	1/6
Colonial 120EB5-40	27 1/4	53 11/16	26 3/8	47 1/4	5.2	10.57	294	1/8	1/6
Norman 120EB6-40	29 1/2	56 1/2	28 3/8	49 1/8	6.24	12.22	315	1/8	1/6

SPECIAL

Kitchenette 120EA3-40	23 1/2	43 11/16	25 3/8	43 1/4	3.13	7.55	230	1/8	1/6
Norman 120EA6-40	29 1/2	56 1/2	26 3/8	49 1/2	6.24	11.7	295	1/8	1/6
Tudor 120EA8-40	32 1/2	60	28 1/4	52 3/8	8.22	16.29	395	1/8	1/6

ELECTRIC **Hotpoint** RANGES

MEASURED HEAT SIMPLIFIES COOKING—ENDS FUEL WASTE—ELIMINATES GUESSWORK

As a good cook carefully measures ingredients, so the Hotpoint Range precisely measures heat. Electric fuel makes it possible to apportion accurately the exact amount of heat for every cooking need. The Calrod surface cooking units, the versatile Thrift Cooker and the over-size, All-Purpose oven cook by Measured Heat, and each is controlled by a single switch which provides five heats. In surface cooking these five heats range the entire scope of cooking from intense High heat to Warm. In oven cooking the single switch controls both heating units (upper and lower) so that heat may be directed from top to bottom, from bottom to top, or in both directions at once. Every type of baking, meat roasting or oven meal cooking is accomplished with perfect results. Broiling is also controlled by the same switch. Hotpoint Measured heat cooking is simple and remarkably accurate. All guesswork is eliminated and perfect results are assured—always.

New, Faster, Easier-to-Clean CALROD Heating Units

The surface heating units are the heart of the electric range. Should these units fail the owner is faced with the expense and annoyance of repairs and replacements. Hotpoint's new, improved Hi-Speed Select-A-Heat Calrod units are faster, more efficient, more durable than ever before. The cleanest and easiest to clean of any electric range surface units. Measured heat for every surface cooking need.

ALL-PURPOSE OVEN—Hotpoint's All-Purpose oven bakes, roasts, broils and cooks complete meals with truly marvelous results. Measured Heat insures perfection for even inexperienced cooks. The single switch control provides a perfect type of heat for each cooking operation and the automatic temperature control affords a wide range of temperature. The oven can operate automatically without attention by simply placing food in oven, snapping the switch, setting the timer control and forgetting the cooking until meal time.

The ovens in all Hotpoint Ranges are over-size and are carefully insulated.

TYPICAL FEATURES

New Hi-Speed Select-A-Heat CALROD Surface Units—Giant and utility size. Standard equipment on all Hotpoint Ranges. Five heats, controlled by a single switch.

All-Purpose Oven—With Measured Heat. Single switch provides choice of five different types of heat on deluxe line. Oversize capacity. Completely Insulated. Porcelain enameled interior—bright nickel-plated, level, easy-sliding shelves. Counter-balanced, drop-type door.

Automatic Oven Temperature Control—Accurately maintains any desired heat.

Oven Timer-Clock—Turns the oven on and off, permitting housewife or maid to cook complete meals while she is free from the kitchen. Also serves as an accurate kitchen clock. Telechron movement. Standard equipment on several models. Available at extra cost on others, excepting RB10.

Hi-Speed Thrift Cooker—Steams or boils at high speed or bakes beans, braises, stews,

pot roasts, french fries or cooks complete meals on intermediate or low heats. Six-quart capacity. Operates on lower heats at extremely low cost. Wire basket for deep-fat frying. Five Measured Heats, controlled by a single switch. Standard equipment on some Hotpoint models.

Battleship Frame—All Hotpoint Electric Ranges are built of sturdy steel. Frames are electrically welded, like a battleship, forming one rigid piece without bolts or nuts to shake loose. Permanently strong and rigid.

Pilot Lights—The Aristocrat, model RC4, is equipped with a Master Pilot light on the back splasher, which indicates with a colored light when the range is operating on any switch. All models are equipped with an oven Pilot Light.

Toe Space—All built-to-floor models have recessed bases, providing toe space which permits operator to stand close to range without leaning.

Hi-Speed Broiler—On Royal and DeLuxe models. Two heats—"Speed Broil" for fast broiling and Broil for slower broiling and toasting. All broiling is done under upper heating unit in oven. Porcelain enameled broiler pan with "smokeless" tray and rack. Standard models have a single broiling heat.

Broiler Measure—An accurate gauge for proper spacing of broiler pan below upper heating unit in oven is imprinted in porcelain enamel lining on side of oven interior of deluxe models only.

Warming Compartment—For keeping foods or dishes hot. A large drawer with separate heating unit. Will not overheat. Models RD3 and RC4. Heating unit available for installation at additional cost on other models, except RB10.

KITCHEN PLANNING

In working out household kitchen lay-outs, we invite architects to ask us questions. Our technicians and designers have analyzed literally thousands of kitchens to determine the most efficient solution to any kitchen problem. By such cooperation, you will be assured a kitchen that serves its function properly. Money and space will be saved and attractiveness as well as utility will be considered.



CALROD UNIT



ALL-PURPOSE OVEN



TIMER-CLOCK



HI-SPEED THRIFT COOKER



BATTLESHIP FRAME

ELECTRIC *Hotpoint* RANGES



THE TREASURE—Model RC1



THE CARLETON—Model RC3



THE ARISTOCRAT—Model RC4



THE DIANA—Model RC7



THE LAUREL—Model RB7



THE FAIRFIELD—Model RB9



THE DARLINGTON
Model RB10



THE MANHATTAN—Model RC5

MODERN STYLING

All Hotpoint Electric Ranges are designed to harmonize with all other Hotpoint kitchen equipment. The Ranges have balanced proportions—streamlined design with straight smooth lines, rounded edges and corners. Backs and sides are flat without protruding surfaces, so that Range may be placed flush against wall with cabinet flush at sides. Beautiful all-white Porcelain or Calgloss baked enamel finish, easy to keep clean.



EASY TO CLEAN—Calrod units are hinged to cooking top. Just lift the coil and reflector pan is removable for washing or scouring.

HOW THE CALROD UNIT IS CONSTRUCTED



Terminal of heavy non-corrosive material threaded into resistance wire.

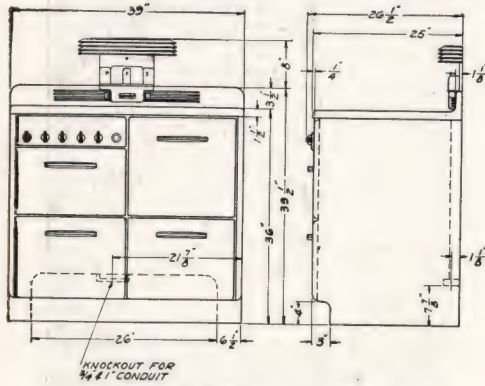
Protective metal casing. Nickel-chromium alloy.

Magnesium oxide electrical insulator and heat conductor.

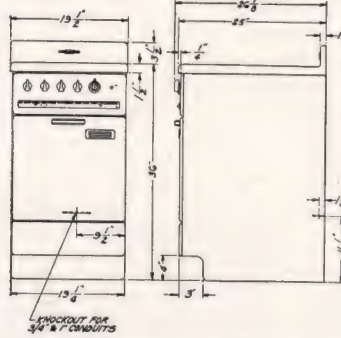
Resistor, Calorite finest grade nickel chromium wire made to Hotpoint specifications.

ELECTRIC **Hotpoint** RANGES

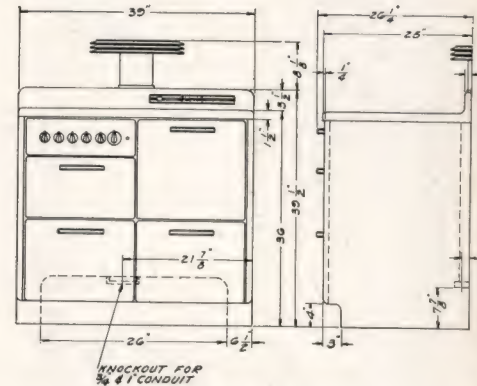
DIMENSIONS AND SPECIFIC DATA



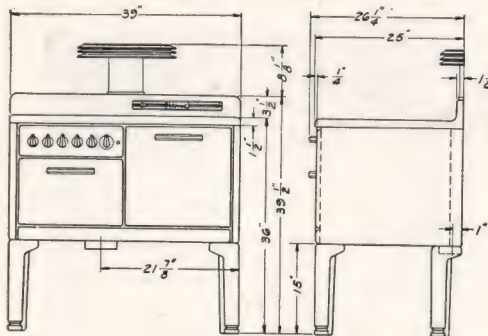
Model RC4—Aristocrat



Model RB10—Darlington



Model RC1—Treasure



Model RC3—Carleton

Model RC4—3 Hi-Speed Select-A-Heat Calrod surface units; one 8½ in., two 6½ in. Hi-Speed Thrift Cooker. Two open coil oven units. Lamp with shelf, condiment set. Master pilot light. Oven interior light. Warming compartment. Two utility drawers, one with utensil tray. Oven timer-clock. White full Porcelain enamel finish.

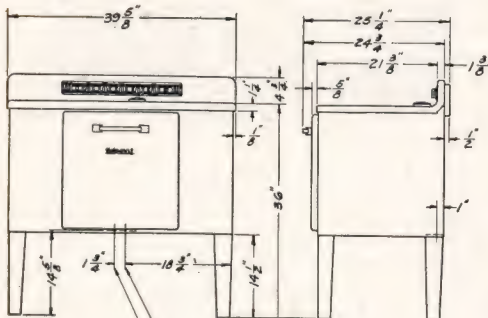
Model RB10—3 Hi-Speed Select-A-Heat Calrod surface units; one 8½ in., two 6½ in. Extra large oven with one open coil unit for baking, roasting, and broiling. Porcelain and Calgloss baked enamel finish.

Model RC1—3 Hi-Speed Select-A-Heat Calrod surface units; one 8½ in., two 6½ in. Hi-Speed Thrift Cooker. Two open coil oven units. Oven pilot light. Oven interior light. Louvred cooking top lamp and condiment set. Three large utility drawers. White, full Porcelain enamel finish.

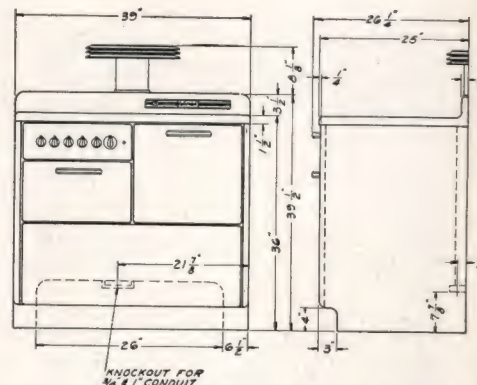
Model RC3—Same as model RC1, except has legs in place of cabinet base. One utility drawer. Do not have oven interior light or Hi-Speed Thrift Cooker.

Model RC7—Same as model RC1, except has only one utility drawer. Base panel can be replaced by drawers at additional cost. Do not have oven interior light or Hi-Speed Thrift Cooker.

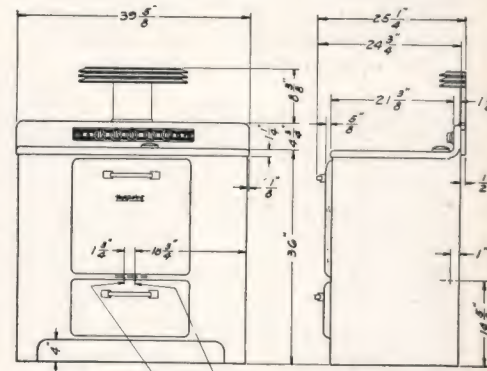
All HOTPOINT RANGES have straight, flush sides and backs with no protruding surfaces. Ranges may be placed flush against wall.



Model RB7—Laurel



Model RC7—Diana

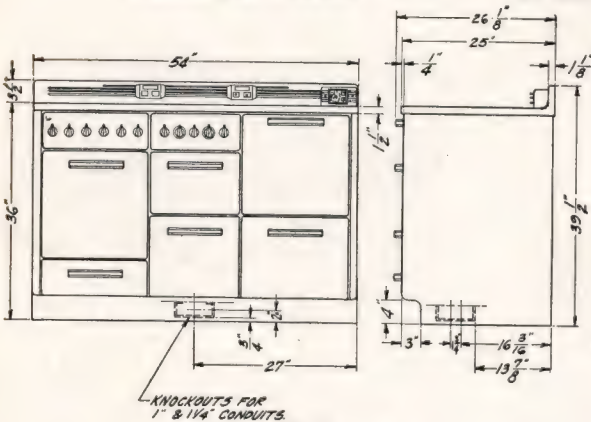


Model RB9—Fairfield

Model RB7—3 Hi-Speed Select-A-Heat Calrod surface units; one 8½ in., two 6½ in. One 3-heat Thrift Cooker. Two open coil oven units. Divided cooking top with work surface in center; switch buttons on back splasher. Louvred cooking top lamp available at additional cost. Body white Porcelain enamel; legs Calgloss baked enamel.

Model RB9—Low priced built-to-floor model with same surface units, oven and Thrift Cooker as model RB7. Louvred cooking top lamp, condiment set and utility drawer included. Full white Porcelain enamel finish.

Model RD3—5 new Hi-Speed Select-A-Heat Calrod surface heating units; two 8½ in., three 6½ in. One Hi-Speed Thrift Cooker (5-heat). Two oversize automatic ovens for baking and broiling, with two (each) heating units. Each oven has Broil-or-Grid griddle and broiler pan. Oven timer-clock. Pilot light for each oven. Warming compartment. Three large utility drawers, one with cutlery tray. Two appliance receptacles. White full porcelain enamel finish.



Model RD3—Empire

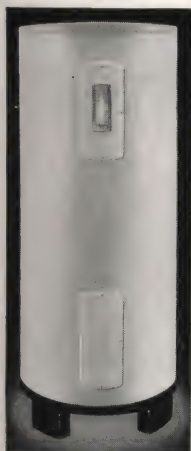
ELECTRIC **Hotpoint** WATER HEATERS

ELECTRIC WATER HEATERS

Heating water by electricity is not expensive. Recent refinements, plus low power rates now available, make it economical, convenient, safe and clean.

Typical of all Hotpoint appliances, Hotpoint electric water heaters are rugged, dependable, and attractive. Ranging from 2 gals. (accessory heaters in professional offices, tourist cabins, etc.) up to 140 gals., most models are available with either galvanized copper bearing steel tanks, or monel metal tanks.

The heating unit is the renowned long-life Calrod immersed from the side of the tank into the water. A completely automatic temperature control switch—The Hotpoint Thermosnap—assures uniform hot water temperature. It is adjustable from 120 degrees F. to 190 degrees. A thick blanket of rock wool insulation keeps all the heat within the tank. Both round and rectangular models are standard. The Vogue Table Top is specially designed to fit in with the other Hotpoint appliances to form the streamlined, Hotpoint, all-electric kitchen.

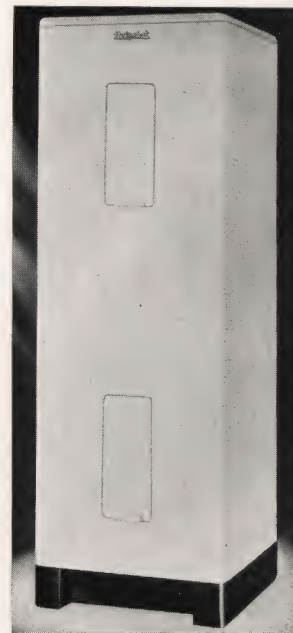


MASTER Model

Note: In this catalog we do not attempt to state the delivery capacity of each heater because of the variables involved. Consult Hotpoint engineers when hot water problems arise. You should have Hotpoint's Water Heater Sales Manual in your file. It will be sent you from the Chicago office for a small charge.



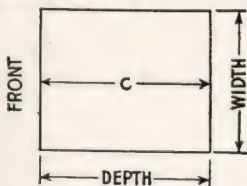
VOGUE Table Top



VOGUE Model

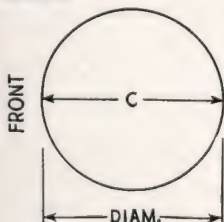
VOGUE (Rectangular)

Capacities: 10 to 140 gals. Vogue models, with their modern rectangular styling are ideal for modern all-electric kitchens, basements or bath rooms. In most cases, galvanized copper bearing steel tanks are recommended, but monel metal tanks should be used where corrosive water exists.



MASTER (Round)

Capacities: 5 gal. to 86 gals. The Master heaters, with round outer casings, embody the same features and refinements of internal construction as the rectangular Vogue model. Small capacity heaters are unexcelled for use in professional offices, business offices, filling stations.



DATA AND DIMENSIONS

DATA AND DIMENSIONS

Cat. No.	Cap. Gal.	Tank Dia.	Base Ht.	Overall Dim.		Floor to Cold Water Inlet	Floor to Hot Water Outlet	Over-all Ht.	Av. Insul. Thickness
				Width	Depth				

VOGUE MODELS (RECTANGULAR)—Back and Bottom Connected

WG312	30	14"	4"	17 1/2"	19 1/2"	3"	42 7/8"	57"	3 3/16"
WG412	40	16"	4"	19 1/2"	21 1/2"	2 1/2"	43 5/8"	58"	3 3/16"
WG512	52	18"	4"	21 1/2"	23 1/2"	2 3/4"	44 1/16"	58"	3 7/16"

VOGUE MODELS—Back Connected Only

WG912	110	24"	4"	27 1/2"	29 1/2"	9 1/16"	53 5/16"	68"	3 13/16"
WG012	140	26"	4"	29 1/2"	31 1/2"	8 7/8"	58 5/8"	73"	3 15/16"

MASTER MODELS (ROUND)—Back Connected

WG342	30	14"	4"	20 1/2"	20 1/2"	7 15/16"	41 15/16"	57"	3"
WG442	40	16"	4"	22 1/2"	22 1/2"	7 15/16"	42 3/4"	58"	3"
WG542	52	18"	4"	24 1/2"	24 1/2"	8 1/4"	43 1/8"	58"	3"
WG642	66	20"	4"	26 1/2"	26 1/2"	7 15/16"	44 7/8"	60"	3"
WG842	86	22"	4"	28 1/2"	28 1/2"	7 15/16"	45 1/8"	63"	3"

MASTER MODELS (ROUND)—Small Capacity Heaters

WG502	5	8"	...	12 1/8"	12 1/8"	1 5/8"	25 3/8"	29 1/8"	2"
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VOGUE MODELS—Small Capacity Heaters

WG112	10	10"	3"	13 1/8"	14 1/8"	43 3/8"	43 3/8"	43 3/8"	2 11/16"
WG212	18	10"	3"	13 1/8"	14 1/8"	64 3/8"	64 3/8"	64 3/8"	2 11/16"

VOGUE TABLE TOP

WG330	30	20"	7"	24"	25"	6 1/4"	6 1/4"	39 1/2"	3"
WG332	30	18"	4"	20 7/8"	22 1/2"	4"	4"	36"	3"

VOGUETTE—"FLOW-THRU"—COPPER TANK—Bottom Connected

WM210	2	...	...	10 1/8"	11 1/8"			18 1/4"	2 5/8"
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VOGUE MODELS—Back Connected

WM912	110	24"	4"	27 1/2"	29 1/2"	9 1/16"	53 5/16"	68"	3 13/16"
WM012	140	26"	4"	29 1/2"	31 1/2"	8 7/8"	58 5/8"	73"	3 15/16"

MASTER (ROUND) MODELS—Back Connected

WM342	30	12"	4"	17 5/8"	17 5/8"	6 9/16"	54 5/8"	69"	2 11/16"
WM442	40	14"	4"	20 1/2"	20 1/2"	6 15/16"	54 5/16"	69"	3"
WM542	50	16"	4"	22 1/2"	22 1/2"	6 15/16"	54 1/8"	69"	3"
WM642	66	20"	4"	26 1/2"	26 1/2"	7 15/16"	44 7/8"	60"	3"
WM842	86	22"	4"	28 1/2"	28 1/2"	7 15/16"	47 7/8"	63"	3"

VOGUE TABLE TOP

WM330	30	20"	4"	24"	25"	6 1/4"	6 1/4"	39 1/2"	3"
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VOGUE MODELS—Small Capacity Heaters

WM112	10	10"	3"	13 1/8"	14 1/8"	43 3/8"	43 3/8"	43 3/8"	2 11/16"
WM212	18	10"	3"	13 1/8"	14 1/8"	64 3/8"	64 3/8"	64 3/8"	2 11/16"

MASTER MODELS—Small Capacity Heaters

WM502	5	8"	...	12 1/8"	12 1/8"	1 5/8"	25 3/8"	29 1/8"	2"
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GALVANIZED TANKS

MONEL TANKS



DISTRICT SALES OFFICES

Boston, Mass.	38 Chauncy St.	Chicago, Ill.	5600 West Taylor St.
New York, N. Y.	570 Lexington Ave. (Room 1102)	Kansas City, Mo.	106 W. 14th St. (Room 2410)
Philadelphia, Pa.	701 Architects Bldg., 17th at Sansom	Dallas, Tex.	1801 North Lamar St.
Atlanta, Ga.	304 Red Rock Bldg.	Salt Lake City, Utah	1218 Continental Bank Bldg.
Cleveland, Ohio	702 Union Trust Bldg.	Seattle, Wash.	1411 Fourth Avenue Bldg.
		Los Angeles, Calif.	601 West Fifth St.

DISTRIBUTORS

Albany, N. Y., Havens Electric Co., 31 Hudson Ave.	Miami, Fla., General Elec. Supply Corp., 120 N. E. 20th St.
Allentown, Pa., Graybar Electric Co., Inc., 110 Hamilton St.	Milwaukee, Wisc., General Elec. Supply Corp., 190 North Broadway
Amarillo, Tex., General Elec. Supply Corp., 115 Polk St.	Minneapolis, Minn., Hotpoint Distributing Branch, 317 N. 7th St.
Atlanta, Ga., General Elec. Supply Corp., 172 Haynes St., S.W.	Newark, N. J., General Elec. Supply Corp., 221 Frelinghuysen Avenue
Baltimore, Md., Simon Distributing Corp., 1305-07 Cathedral St.	New Orleans, La., Graybar Electric Co., Inc., 601 S. Peters St.
Bangor, Maine, R. B. Dunning Company, 54 Broad St.	New York, N. Y., General Elec. Supply Corp., 585 Hudson Ave.
Battle Creek, Mich., Central Elec. Supply Co., 10-16 W. State St.	Norfolk, Va., General Elec. Supply Corp., 267 Bank St.
Binghamton, N. Y., Southern Tier Elec. Sy. Co., Inc., 188-190 State St.	Oklahoma City, Okla., Graybar Electric Co., Inc., 706 West Main Street
Birmingham, Ala., Graybar Electric Co., Inc., 1529 First Ave., No. Bluefield, W. Va., Bluefield Supply Company, 116 Bluefield Ave.	Omaha, Neb., Graybar Electric Co., Inc., 1120 Capitol Ave.
Boston, Mass., General Elec. Supply Corp., 378 Stuart St.	Philadelphia, Pa., General Elec. Supply Corp., 429 North 7th St.
Buffalo, N. Y., Hotpoint Distributing Branch, 887 Main St.	Philadelphia, Pa., Elliott-Lewis Elec. Co., Inc., 1017 Race St.
Burlington, Vt., Vermont Hardware Co., Inc.	Phoenix, Ariz., General Elec. Supply Corp., 441 West Madison Street
Butte, Mont., Graybar Electric Co., Inc., Harrison & E. Front Sts.	Pittsburgh, Pa., General Elec. Supply Corp., 420 Duquesne Way
Cedar Rapids, Ia., Terry-Durin Company, 409 Seventh Ave.	Portland, Ore., Graybar Electric Co., Inc., 809 N. W. Flanders St.
Charlotte, N. C., General Elec. Supply Corp., 421 Penman St.	Portland, Ore., The Stubbs Electric Co., 33 N. W. Park Ave.
Chattanooga, Tenn., Harry W. Cameron, Inc., 1021 Chestnut St.	Poughkeepsie, N. Y., Electra Supply Co., Inc., 365 Mill St.
Chicago, Ill., General Elec. Supply Corp., 350 North Ogden Ave.	Providence, R. I., General Elec. Supply Corp., 267 Harris Ave.
Cincinnati, Ohio, General Elec. Supply Corp., 215 West Third St.	Quincy, Ill., Crescent Elec. Supply Co., 217 North Third St.
Cincinnati, Ohio, The Johnson Elec. & Supply Co., 329 Main St.	Raleigh, N. C., General Elec. Supply Corp., 311 West Martin St.
Cleveland, Ohio, The M & M Company, 5200 Prospect Ave.	Reading, Pa., Graybar Electric Co., Inc., 22 South Third St.
Columbia, S. C., Graybar Electric Co., Inc., 1927 Main St.	Richmond, Va., General Elec. Supply Corp., 4th and Canal Sts.
Columbus, Ohio, General Elec. Supply Corp., 146 North Third St.	Roanoke, Va., General Elec. Supply Corp., 515 Fifth Street, S. W.
Columbus, Ohio, The Pixley Elec. Supply Co., 129-33 E. Chestnut St.	Rochester, N. Y., Hotpoint Distributing Branch, 48 King St.
Dallas, Tex., Graybar Electric Co., Inc., 400 South Austin	Rockford, Ill., General Elec. Supply Corp., 118-22 S. First St.
Dayton, Ohio, General Elec. Supply Corp., 601 East Third St.	St. Louis, Mo., General Elec. Supply Corp., 200 South 7th St.
Denver, Colo., General Elec. Supply Corp., 1429 18th St.	Salt Lake City, Utah, Graybar Electric Co., Inc., 245 South First West St.
Des Moines, Iowa, Electric Supply Co., Inc., 1300 Walnut St.	San Antonio, Tex., Graybar Electric Co., Inc., Hackberry & Duval Streets
Detroit, Mich., Graybar Electric Co., Inc., 55 West Canfield	San Diego, Calif., General Elec. Supply Corp., 206 West Market Street
Elmira, N. Y., Southern Tier Elec. Sy. Co., Inc., 107 E. Church St.	San Francisco, Calif., The Elec. Kitchen Appliance Co., 560 Ninth St.
El Paso, Tex., General Elec. Supply Corp., 425 W. San Antonio St.	Savannah, Ga., General Elec. Supply Corp., 22 Bay St.
Erie, Pa., W. A. Case & Son Mfg. Co., 2001 Parade St.	Seattle, Wash., Graybar Electric Co., Inc., King & Occidental Sts.
Flint, Mich., Graybar Electric Co., 120 East Third St.	Shreveport, La., Interstate Electric Co., 300 Spring St.
Fort Wayne, Ind., The Protective Elec. Supply Co., 130 West Columbia St.	South Bend, Ind., General Elec. Supply Corp., 402 Carroll St.
Fresno, Calif., General Elec. Supply Corp., 1117 N St.	Spokane, Wash., Graybar Electric Co., Inc., 152 South Post St.
Grand Rapids, Mich., Nilsson Distributing Corp., 206 Jefferson Ave., S. E.	Springfield, Ill., General Elec. Supply Corp., 1007 East Jefferson Street
Harrisburg, Pa., Graybar Electric Co., Inc., 400 S. Second St.	Springfield, Mass., General Elec. Supply Corp., 555 State St.
Hartford, Conn., General Elec. Supply Corp., 338 Ann St.	Syracuse, N. Y., Hotpoint Distributing Branch, 230 West Genesee St.
Houston, Tex., Graybar Electric Co., Inc., Commerce & Chartres Street	Tampa, Fla., General Elec. Supply Corp., 604 Ella Mae St.
Honolulu, Hawaii, Hawaiian Electric Co., Ltd., P. O. Box 2750	Toledo, Ohio, General Elec. Supply Corp., 28-32 St. Clair St.
Indianapolis, Ind., General Elec. Supply Corp., 326 West Georgia Street	Washington, D. C., Simon Distributing Corp., 2501 H Street, N. W.
Jackson, Miss., Orgill Bros. Hardware Co., Pearl & Pascagoula Sts.	Wichita, Kans., Graybar Electric Co., Inc., 424 North Rock Island Ave.
Jacksonville, Fla., General Elec. Supply Corp., 530 East Forsyth Street	Worcester, Mass., General Elec. Supply Corp., 290 Franklin St.
Johnstown, Pa., General Elec. Supply Corp., 216 Dibert St.	Wheeling, W. Va., Wheeling Kitchen Equipment Co., 1318 Main Street
Kansas City, Mo., Graybar Elec. Co., Inc., 1644 Baltimore Ave.	Youngstown, Ohio, General Elec. Supply Corp., 265 W. Rayen Ave.
Little Rock, Ark., General Elec. Supply Corp., 301 East Markham	
Los Angeles, Calif., General Elec. Supply Corp., 700 Turner St.	
Louisville, Ky., Rietze Distributing Co., 977 Logan St.	
Madison, Wisc., Crescent Elec. Supply Co., 123 North Blount St.	
Memphis, Tenn., Stratton-Warren Hardware Co., Carolina and Florida Street	

EDISON GENERAL ELECTRIC APPLIANCE CO., INC.
5600 WEST TAYLOR STREET ★ CHICAGO, ILLINOIS



BETTER LIGHT—BETTER SIGHT RECOMMENDATIONS

For Your New Home

NIGHTTIME LIGHTING . . .

for the hours when a family is most apt to gather at the home hearth! Here is a comfort that deserves special consideration in the planning of a new house.

Within recent years there have been remarkable developments in electric lighting. That your seeing conditions can be improved by better light has been demonstrated by lighting research scientists. *The need* for good lighting has been revealed in many tests on eyes. In turn, lighting engineers and specialists have developed and specified *new ways* to secure this better light for better sight. Illustrated in this folder are types of fixtures and lamps which lighting engineers consider capable of giving better lighting. When used in the right locations with the right-size bulbs, these units will produce lighting that helps conserve eyesight and adds charm to the appearance of the home.

In building a home it is wise to apportion 1½ per cent of the total building costs to good ceiling and wall lighting fixtures.

And it's just as important to see that your lamps and fixtures have the right size G-E bulbs in them. Be sure to look for the "G-E" mark and you'll get lamp bulbs *made to stay brighter longer!*



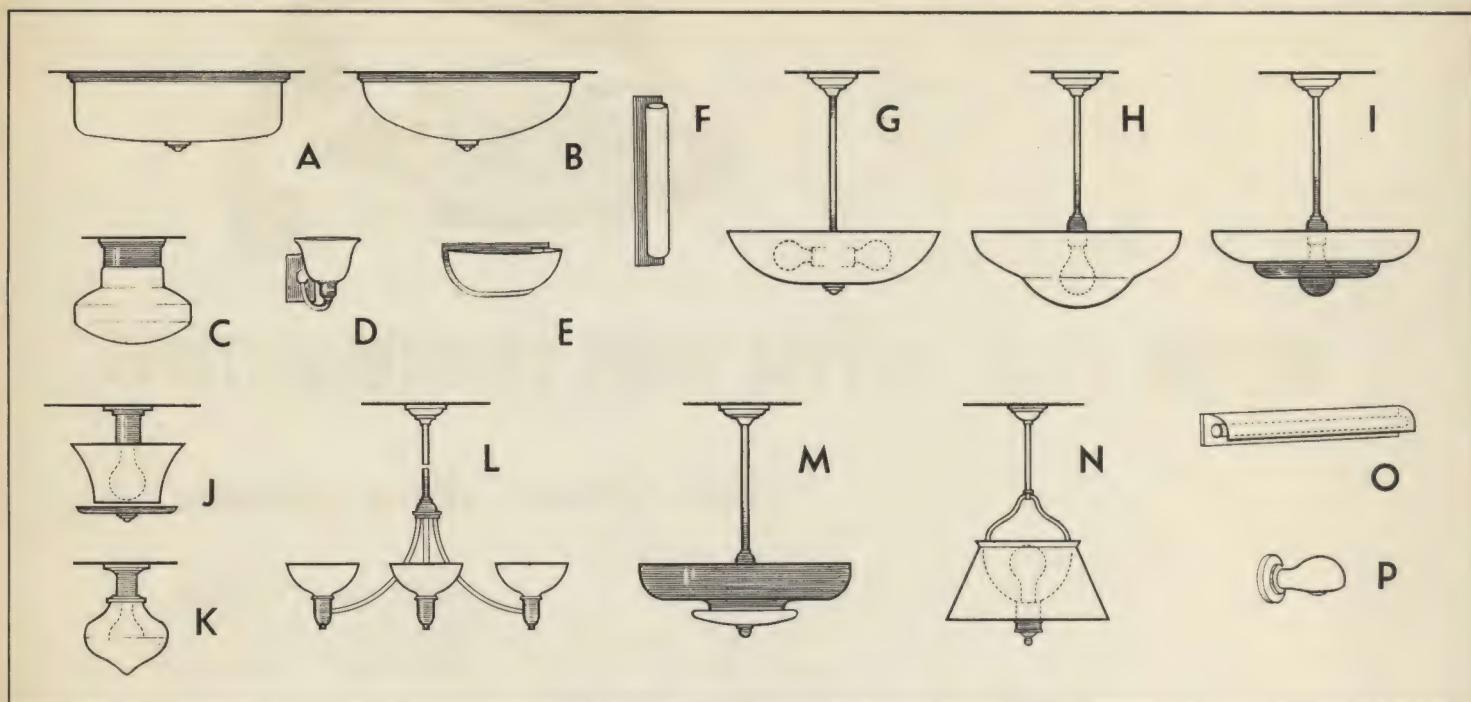
In addition to the general suggestions about good lamps and fixtures on the following pages, you can secure valuable information about light conditioning your new home from your local electric service company. Also write for a free copy of our illustrated booklet "How to Light Condition Your Home." General Electric Company, Dept. 166-SY, Nela Park, Cleveland, Ohio.



G-E MAZDA LAMPS

GENERAL ELECTRIC

† TYPES of LIGHTING FIXTURES AVAILABLE *in a Variety of Designs*



FIXTURE TYPES, SIZES AND CAPACITIES FOR RESIDENCES

ROOMS	A* & B*	C	D**	E**	F	G-H-I-J	K	L	M & N	O & P
Hall	10" 60-75W 12" 75-100W					12" 75-100W		1 light 60W		
Living Room	14" 100-120W 16" 120-160W 18" 160-200W		Double-arm type 40-60W each socket	60-100W		14" 100-150W 16" 150-240W		5 light 200-300W		Built-in furniture 30-40-60W
Library						14" 100-150W 16" 150-240W		5 light 200-300W		Built-in furniture 30-40-60W
Dining Room			Double-arm type 40-60W each socket	60-100W				5 light 200-300W	14" 100-150W 16" 150-300W	
Breakfast Room								3 light 120-180W	12" 75-100W	Built-in furniture 30-40-60W
Kitchen		Center ceiling 10" 100W 12" 100-150W Over sink and range 7" 60W					12" 100-150W 14" 150-200W			Under wall cabinets— Over ranges 40-60W
Bathroom		9" 75W 10" 100W	40-60W each side of mirrors		30W each side of mirrors Usually used with Types C and K		9" 75W 10" 100W			P type one. Pairs at mirrors; dressing tables 40-60W
Bedroom				60-100W		12" 75-100W		3 light 120-180W		Built-in furniture 30-40-60W
Dressing Room	10" 60-75W 12" 75-100W				60W each side of mirrors Usually used with Types C and K					Pairs at mirrors; dressing tables 40-60W
Basement (General)		9" 75W 10" 100W								At work benches, etc. 40-60W
Laundry		10" 100W 12" 100-150W 14" 150-200W								
Garage		9" 75W 10" 100W								At work benches, etc. 40-60W

* Used where ceilings are low; also in small areas.

** When used to create general room illumination of a low or medium value, provide at least four fixtures in balanced pairs on opposite walls. Where the long dimension of room materially exceeds the short dimension, use balanced pairs on each of the four walls.

† Since these drawings represent only general "types" of fixtures, they are not intended to express style or detailed finish. Most of these types may be secured in a variety of designs suited to modern or period furnishings.

● Shown on this page and the next are nine types of Certified I.E.S. Specification Lamps. More than 60 manufacturers make these lamps over the 54 specifications of the Illuminating Engineering Society, national professional group of lighting engineers and scientists. The lamps are exactly built to give better light for better sight. They come in many styles for all decorative themes. The charts suggest types for almost every room in the home.

Type Lamp	Approved for:		Suggestions for Satisfactory Use	Uses to be Generally Avoided
	Watts	Bowl Diameter		
 TABLE STUDY AND READING	100	8"	On the left-hand side of flat-top desks.	On small-scale desks or tables.
	150	9 $\frac{3}{8}$ "	On large living room tables with diameter of 27" or more, or on tables behind davenports. (150-watt models, in either case.)	On standard height end tables by low lounge chairs.
	50-100-150 (2-filament)	9 $\frac{3}{8}$ "	On large-scale end tables, if surroundings suitable in scale.	On small, low end tables. Centered in front of user.
			On dining room or kitchen tables when used for reading or study.	
 FLOOR STUDY AND READING	100	8"	Beside (and slightly to rear of) lounge chairs.	Near small occasional chairs.
	150	9 $\frac{3}{8}$ "	At ends of davenport, close to wall.	As a piano lamp—not tall enough to give adequate light on music.
	50-100-150 (2-filament)	9 $\frac{3}{8}$ "	At left of secretaries, small writing tables, slant-front desks.	Where more than 20-25 footcandles needed for eye tasks.
			To serve twin beds placed very close together. (150-watt model.)	
 SWIVEL FLOOR	100	8"	Same as Floor Study and Reading Lamp. Adjustability feature brings light source nearer to work surface, thereby insuring desired illumination values.	With very small-scale desks or chairs.
	150	9 $\frac{3}{8}$ "		
	50-100-150 (2-filament)	9 $\frac{3}{8}$ "	Useful for closed-top desks, drawing boards, sewing chairs, beds, chaises longues.	
 BRIDGE	100	8"	Same as Floor Study and Reading Lamp.	Behind davenport or love-seat.
	150	9 $\frac{3}{8}$ "		
	50-100-150 (2-filament)	9 $\frac{3}{8}$ "	Also (because of smaller size) beside occasional chairs and very small writing desks or tables or where (physically or decoratively) larger lamp not suitable.	Where more than one person's need is involved.

SUGGESTIONS for USE of I-E-S *Better Sight* LAMPS

SUGGESTIONS for USE of I.E.S. *Better Sight* LAMPS

● I.E.S. Lamps are identified by tags, illustrated below. These certify that samples of the lamps have passed the rigid inspections of the Electrical Testing Laboratories in New York, and comply with the 54 specifications of the Illuminating Engineering Society. Since I.E.S. Lamps are made by more than 60 manufacturers, they may be secured in a wide price range.

Type Lamp	Approved for:		Suggestions for Satisfactory Use	Uses to be Generally Avoided
	Watts	Bowl Diam.		
 WALL TYPE	100	8"	At left, over flat-top or small slant-front desks; over beds, sewing machines, chairs or davenports. Any place where light is needed, but space prohibits use of other types.	In formal rooms. Centered over desks.
 END TABLE	100	Prismatic glass or crystal opal glass	On end tables approximately 26" high. Essential to have other (generally distributed) light in room.	On high end tables by low-seated furniture.
 SEMI-INDIRECT	100-200-300 (2-filament) or 250-watt Indirect-Lite	10" 10"	Toward rear of good-sized over-stuffed chairs, or centered behind davenports. For producing greater lighting effectiveness both locally and generally throughout a room. For piano lamp.	At ends of davenport (unless so placed that lamp standard can be even with back of davenport). Beside chairs that are flat against a wall. Beside flat-top desks, except when lamp can be placed slightly behind chair. Near low lounge chairs or occasional chairs.
 SEMI-INDIRECT (WITH CANDLES)	100-200-300 (2-filament) or 250-watt Indirect-Lite Three 40-watt in candle sockets with diffusing cups	10"	Same as semi-indirect without candles. Candles to be considered as plus values for producing higher amounts of light when needed for more difficult or prolonged work. Diffusing cups may be purchased to reduce glare from candles not so equipped.	Same as above. Particularly, avoid using where unshaded lamps in candles may be seen when seated. Avoid using candles alone for reading, sewing, etc.
 INDIRECT TORCHERE	250-watt, 300-watt, or 100-200-300 (2-filament)	Metal—various sizes	To provide general room illumination. In recreation rooms, dining rooms, etc., where no critical visual work is done. In dark-finished rooms, where extra light is needed to make up for absorption by color of finish.	Not recommended for reading, sewing, or any critical seeing work when used alone.

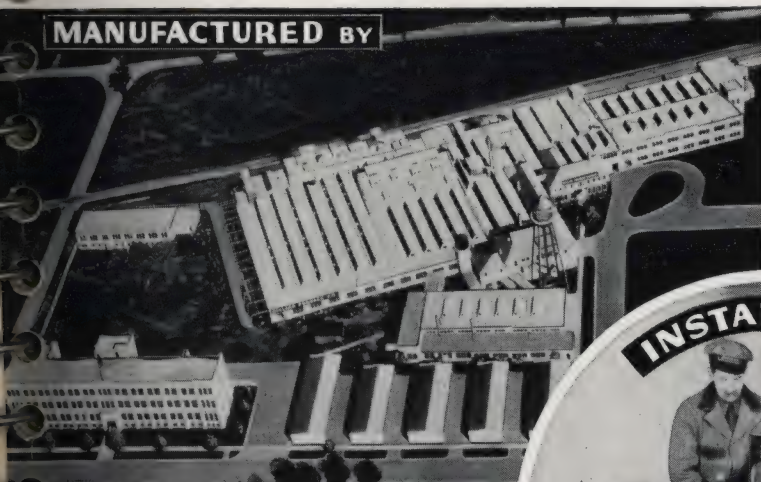


This tag certifies compliance with the I. E. S. specification

HOLLAND

WORLD'S LARGEST INSTALLERS
OF
HOME HEATING AND
AIR CONDITIONING SYSTEMS

MANUFACTURED BY



MAIN PLANT AT HOLLAND, MICH.

DISTRIBUTED BY



QUALIFIED HOLLAND REPRESENTATIVES

GUARANTEED BY



GENERAL OFFICES AT HOLLAND, MICHIGAN

INSTALLED BY



HOLLAND TRAINED MECHANICS

SERVICED BY

HOLLAND FURNACE COMPANY



CITY FACTORY BRANCH

EXPERT HOLLAND SERVICE MEN



HOLLAND FURNACE COMPANY

HOLLAND, MICHIGAN

The Company

For more than a third of a century, the HOLLAND FURNACE COMPANY has specialized exclusively in warm air heating and air conditioning. Its steady, substantial growth to its long-established position as one of the recognized leaders in the industry is to a great extent due to the rigid policy of assuming full responsibility for every installation and guaranteeing satisfactory results.

The tremendous quantity production and scientific manufacturing methods employed by the HOLLAND FURNACE COMPANY make possible marketing the highest quality equipment at prices well within the means of every homeowner. Years of exhaustive research and development have been spent in producing the complete line of products described on these pages.

Our Product



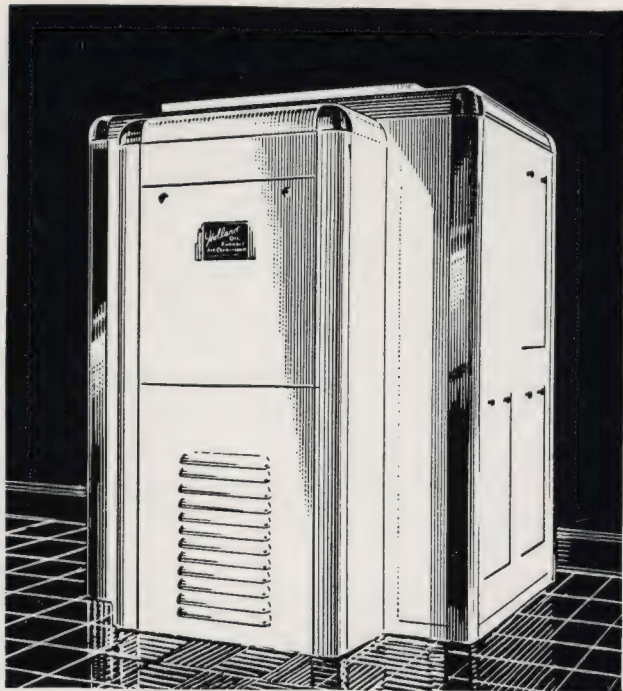
facture, sale, installation, and service of its products, complete satisfaction is assured.

Direct factory supervision of every heating installation relieves the architect of the burden of responsibility, and the wealth of valuable heating information in the hands of Holland's engineers is at his disposal without obligation. Because of the completeness of Holland's line of equipment, only the most suitable need be recommended.

Its Services

All Holland equipment is distributed through nearly 500 direct factory branches from coast to coast. Each branch has its own heating experts whose thorough training and practical experience qualify them as specialists in engineering and installing perfect heating systems. With Holland assuming undivided responsibility for the manu-

HOLLAND AUTOMATIC FURNACE AIR CONDITIONER FOR OIL OR GAS



In this attractive modern cabinet, Holland engineers have combined a revolutionary new warm air furnace and air conditioner with automatic heating equipment using oil or gas as fuel. The burners for the two fuels are instantly interchangeable so that the homeowner is not limited to the use of the one originally chosen should the cost of that fuel become exorbitantly high.

Holland has incorporated many outstanding improvements for safety, silence, dependability, and economy in virtually every detail of this compact unit. The use of mechanical equipment which has been proved reliable by years of trouble-free performance assures completely automatic operation and safeguards the entire heating system. The unique heating unit is made of Hollandized Iron whose inherent heat-storing ability eliminates all possibility of "Cold 70" or alternating hot and cold periods experienced with light sheet metal furnaces.

This equipment is approved for oil fuel by the National Board of Fire Underwriters, and for gas by the American Gas Association Testing Laboratories. It has received universal acceptance in thousands of American homes, schools, churches, and small retail establishments, many of which report substantial fuel savings over their previous methods of heating.

EXCLUSIVE ENGINEERING FEATURES

Oil Burner—Large capacity two-stage fuel pump. Slow-speed, direct-drive motor, rubber mounted. Standard equipment includes safety control to protect against ignition, flame, and power failure. Entire burner floats in rubber mountings.

Gas Burner—Atmospheric type requiring no motor or blower. Extremely simple design with high operating efficiency. Automatic safety pilot causes immediate shut-down in event of flame or power failure.

Heating Unit—Revolutionary design, providing long fire travel and maximum heating surface. Horizontal construction and double smoke outlets eliminate gas pockets and resulting explosions experienced where vertical gas travel is used. Casting material and construction act as muffler on flame noise.

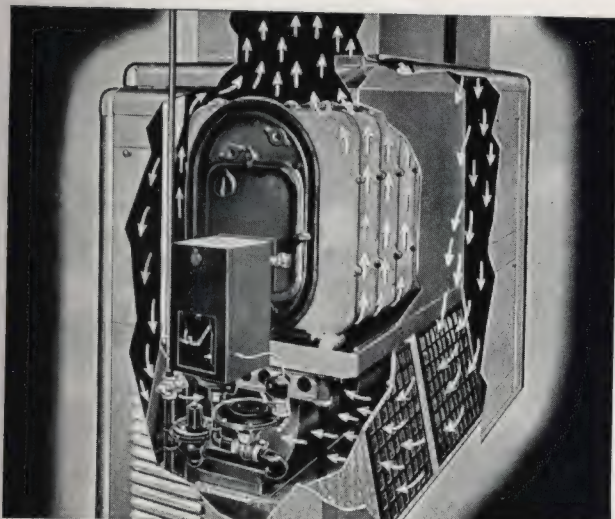
Cabinet—Patented double casing eliminates heat loss to basement. Return air is preheated by contact with inner casing.

Blower Assembly—Twin blowers insure better air distribution over castings, thus preventing undue stress in metal. Extra capacity permits slower speeds with corresponding quietness, and allows maximum circulation during hot weather. Serves dual purpose by insulating heating unit from the floor.

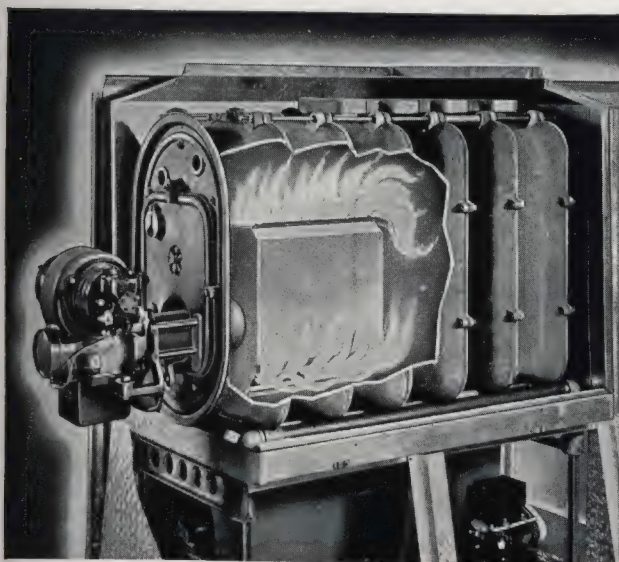
Filters—Exceptionally large filter area thoroughly removes dust and dirt particles, and permits longer periods between cleaning and replacement.

Humidifier—Special adaptation of Holland's famous Cascade Humidifier supplies correct amount of moisture at all times.

HOLLAND AUTOMATIC FURNACE AIR CONDITIONER FOR OIL OR GAS



Holland Atmospheric Gas Burner applied to the Automatic Furnace Air Conditioner



Holland Oil Burner applied to the Automatic Furnace Air Conditioner

The accompanying cutaway view shows the patented double casing arrangement, and also indicates the path of air flow through the unit. Cool air from the rooms is drawn down between the casings *under suction*, thus eliminating all outward leakage into the basement. The air is preheated by contact with the sides and rear panels of the inner casing before passing through the large filter area and into the blower section.

The twin blowers then distribute the air evenly over the heating surfaces, insuring maximum heat transfer. As the clean, warm air leaves the heating chamber, it absorbs the proper amount of moisture from the Cascade Humidifier which is automatically supplied with fresh water at all times. The air is then thoroughly mixed in the plenum chamber so that each duct receives the proper amount and at the correct temperature.

An additional function of the blower section is to insulate the entire casting assembly from the floor. This arrangement, together with the double casing construction, eliminates the wasteful heat losses in the basement which are so objectionable on ordinary furnaces. Furthermore, every square inch of the casting assembly is prime heating surface, radiating warmth only to the air going to the rooms.

Constructed of a special high-temperature metal, this new type oil burner combustion chamber reaches flame temperature instantly to provide maximum combustion efficiency immediately after the burner starts. It antiquates the heavy fire-brick linings used in ordinary furnaces, since these act as an insulator between the flame and the heating surfaces.

The combustion chamber is especially designed to spread the flame to all parts of the castings so that every square inch of heating surface is utilized. After leaving the large expansion chamber where the fuel is completely burned, the hot flue gases slowly pass through the winding passages of the economizer and smokepipe sections to permit the thorough extraction of every available heat unit.

When the unit is equipped with a gas burner, the combustion chamber is replaced by a specially designed flame target, made of the same high-temperature metal. It also serves to spread the flame to all parts of the castings so that no strain will be caused by uneven heating.

In the selection of a gas-fired unit, special consideration must be given to the fact that one of the principal products of gas combustion is a corrosive water vapor which will attack the light sheet metal and ordinary steel used in many other furnaces. The Hollandized castings used in the Automatic Furnace Air Conditioner are not affected by these acids or rust, and will give years of satisfactory service and exceptional performance.

UNIT SPECIFICATIONS

Unit Number	440 Oil or Gas	545 Oil or Gas	650 Gas	650 Oil	770 Oil
Capacity-B.t.u./hr. at Registers.....	85,000	115,000	145,000	180,000	250,000
Approx. heating capacity, cu. ft.....	15,000	21,000	28,000	34,000	46,000
*Normal CFM delivery.....	1,420	1,920	2,420	3,000	4,170
Filters—number and size.....	2—20 x 25	{4—20 x 20} {1—20 x 25}	{2—20 x 20} {3—20 x 25}	{2—20 x 20} {3—20 x 25}	5—20 x 25
Motor Horsepower	1/4	1/8	1/2	1/2	2—1/2
Motor Voltage	110	110	110/220	110/220	110/220
Over-all length, in.....	53	73	81	81	88
Over-all width, in.....	45	45	45	45	45
Minimum basement depth, in.....	80	80	80	80	84
Smokepipe size, in.....	8	8	8	8	8
Height to center of flue outlet, in.....	66	66	66	66	69
Recommended chimney size, in.....	8 1/2 x 8 1/2	8 1/2 x 13	13 x 13	13 x 13	13 x 18

*Variable-pitch motor pulley may be adjusted to meet individual installation requirements.

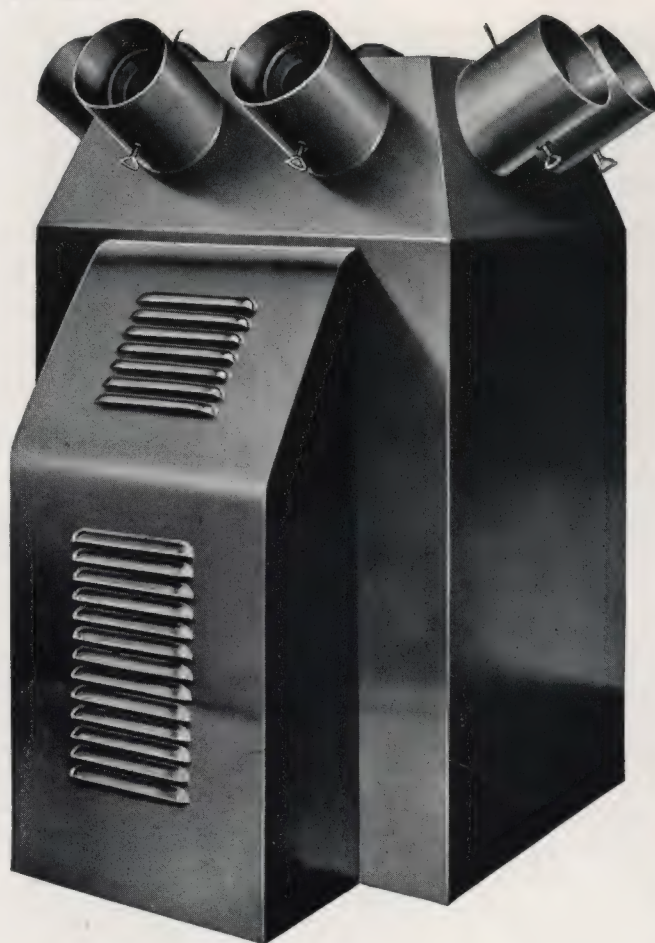
**HOLLAND AUTOMATIC GRAVITY FURNACE
FOR OIL OR GAS**

The Automatic Furnace shown and described on this page is by far the most versatile unit ever presented by any manufacturer in the heating industry. It is equally adaptable to either oil- or gas-fired automatic heating equipment, and is also designed specifically to provide for the addition of a modern air conditioning system for the discriminating homeowner.

Constructed of the same high quality materials as the Automatic Furnace Air Conditioner described on the preceding pages, this modern unit makes efficient, automatic heating available to the small home at a surprisingly low cost. It has successfully passed the rigid laboratory tests of the American Gas Association for gas equipment, and is fully approved by the National Board of Fire Underwriters when oil is used for fuel.

Standard control equipment includes all necessary items for safe, dependable temperature regulation. Oil-fired units are equipped with a safety device to safeguard against ignition, flame, or power failure, while the gas burner includes an automatic safety pilot to insure foolproof operation at all times. Both burners are completely enclosed in an attractive, ventilated cabinet to further improve the modern appearance of the unit, as well as to prevent tampering by small children.

Because the burners and the entire heating unit of the Automatic Gravity Furnace are identical to those which are used in the Automatic Furnace Air Conditioner, it is possible for the homeowner to convert the unit to a modern air conditioning system at any time for only a slight additional cost. The many advanced engineering features incorporated in the Automatic Gravity Furnace insure it against obsolescence for many years to come.



Above View Shows Flame Target
for the Atmospheric Gas Burner

The casting assembly is made entirely of Hollandized Iron, a special material whose heat-retaining and sound-absorbing qualities are unsurpassed. The streamlined castings offer minimum resistance to the flow of air passing over the heating surfaces, and also present no opportunity for the hot flue gases to become pocketed within the unit. The metal is not affected by the corrosive vapors which are formed whenever gas is burned, and will continue to give satisfactory heating service long after an ordinary furnace has been destroyed by these destructive acids.

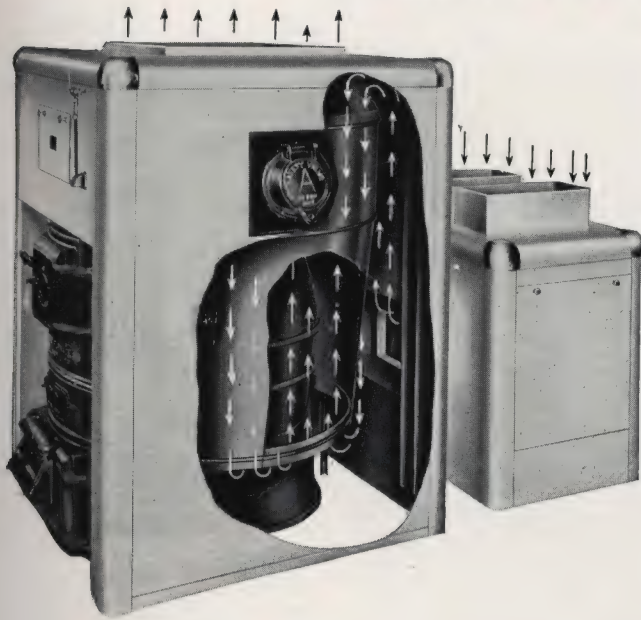
Among the many other noteworthy features of this remarkable Automatic Furnace is the Holland Cascade Humidifier which automatically supplies the proper amount of moisture to the air at all times. The attractive square casing incorporates a terne plate inner liner as an integral unit so that wasteful radiation losses to the basement are held to an absolute minimum. The large, open chamber immediately below the casting assembly serves the dual purpose of insulating the heating unit from the floor, and as a preheating chamber for the cool air being returned from the rooms.

UNIT SPECIFICATIONS

Unit No.	Input B.t.u./hr.	Capacity B.t.u./hr. at registers	Maximum leader area gravity, sq. in.			Over-all dimensions, in.			Smoke pipe size,* in.	Recom- mended flue size, in.
			1-story	2-story	3-story	Width	Length	Height		
GO-4 (Oil) or GG-4 (Gas)	125,000	70,500	635	520	425	40½	50	65	8	8½x8½

*Height from floor to center of flue outlet—59 in.

HOLLAND TYPE "B" AIR CONDITIONER



Although the Type "B" Air Conditioner was designed primarily for use with the Holland Vaporaire Heating System, it may be applied to practically any good warm air furnace with satisfactory results. Because it is capable of delivering large quantities of air for a considerable distance, the entire heating plant may be located in a remote corner of the basement, permitting the remainder of the open basement space to be utilized as a recreational area, game room, laundry, etc.

The blower unit is generously oversized to permit rapid circulation of clean, filtered air during the summer months in addition to its principal function of providing warm, conditioned air throughout the heating season. Since the air delivery of each blower is adjustable over a wide range by merely changing the pitch of the variable-speed motor pulley, each installation may be "tailor-made" to fit the individual requirements.

Holland's unique method of introducing air to the heating unit is a radical improvement over the ordinary blower which blasts the air directly against the hot castings, and which makes no provision for confining the rapidly moving air close to the heating surfaces. The inevitable results of such a poor arrangement are high casing temperatures, uneven pipe temperatures, and cracked castings due to their uneven expansion and contraction.

The special forced air inner liner, used in conjunction with the top horizontal discharge blower in the Type "B" Air Conditioner, provides a preheating chamber where the air is warmed before coming in direct contact with the castings. It also confines the air close to the heating surfaces, and provides even air distribution over the castings, thus insuring long furnace life, low casing temperatures, and perfect heat to every room.

UNIT SPECIFICATIONS

Unit Number	37-120	40-120	45-120	50-135	60-165
Capacity—B.t.u./hr. at registers.....	56,500	68,000	86,500	111,000	160,000
Approx. heating capacity, cu. ft.....	7,500	10,000	15,000	20,000	30,000
*Normal CFM delivery.....	950	1,150	1,450	1,850	2,700
Filters—number and size, in.....	{2—20 x 25} {1—20 x 20}	{2—20 x 25} {1—20 x 20}	{2—20 x 25} {1—20 x 20}	4—16 x 25	6—16 x 25
Motor horsepower	1/4	1/4	1/4	1/2	1/2
Motor voltage	110	110	110	110	110/220
Over-all length, in.....	74	77	82	92	110
Over-all width, in.....	40	40	45	50	60
Minimum basement depth, in.....	80	80	80	80	80
Smokepipe size, in.....	8	8	8	9	9
Height to center of flue outlet, in.....	45	46	46	47	48
Recommended chimney size, in.....	8 1/2 x 8 1/2	8 1/2 x 8 1/2	8 1/2 x 8 1/2	8 1/2 x 13	13 x 13

*Variable-pitch motor pulley may be adjusted to meet individual installation requirements.

HOLLAND TYPE "A" AIR CONDITIONER

An exclusive product of the HOLLAND FURNACE COMPANY, the Type "A" Air Conditioner is a powerful propeller-type air circulator which may be installed on any warm air heating system as well as on the Holland Vaporaire Furnace. It not only forces clean, filtered air to every part of the home, but also provides considerable fuel savings and protection to the furnace castings because of the greatly increased heat circulation.

The Type "A" Air Conditioner operates at a much lower hood temperature than an ordinary gravity furnace, and yet delivers an abundant supply of moderately warm air, scientifically cleaned and properly humidified. Its operation is made entirely automatic by the controls furnished as standard equipment.

The benefits derived from the use of this equipment are not limited to winter heating comfort alone. During the hot summer months, the Holland Type "A" Air Conditioning System will afford delightful relief by circulating clean air throughout the home. When desirable, the filter access doors may be removed in order to draw the cool basement air through the filters and into the living quarters.

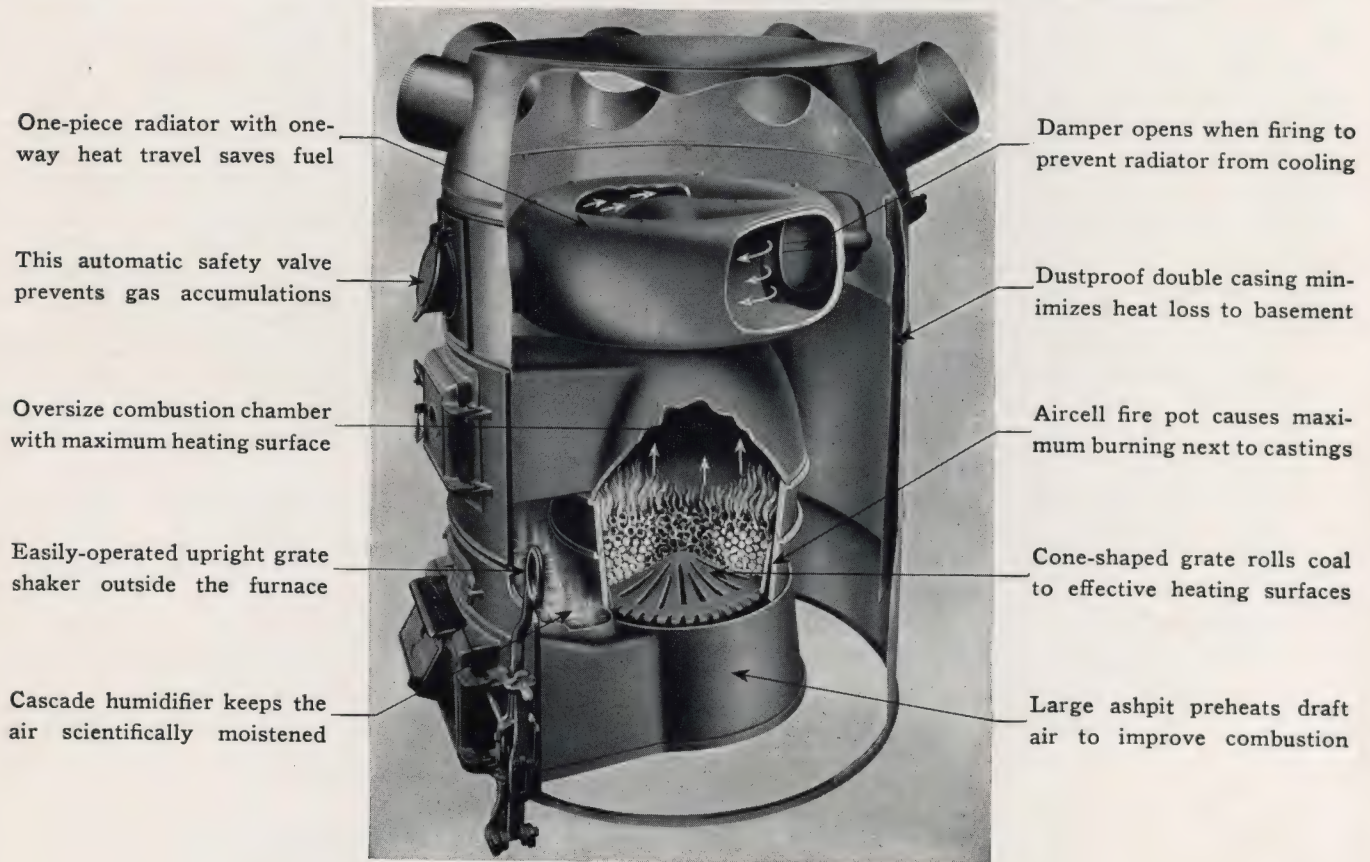
The Type "A" Air Conditioner requires no additional basement space, since it is placed entirely within the hood of the furnace. It offers no resistance to the flow of air through the furnace when it is not in operation, and permits installing full-size return air connections.



HOLLAND VAPORAIRE HEATING SYSTEM

For a period of over 34 years, the HOLLAND FURNACE COMPANY has sold and installed more warm air heating systems than any other concern in the industry. This remarkable record may be attributed not only to the fact that Holland assumes full responsibility for every installation, but also to the many exclusive and outstanding features included in Holland's Vaporaire Heating System described on this page.

The Holland Furnace is readily adaptable to burn all types of fuel—coal, coke, oil, or gas—efficiently and economically. Either bituminous or anthracite coal, including the small pea and buckwheat sizes, may be used successfully without changing the grate. It is extremely flexible to meet the demands of varying weather conditions, and may be inexpensively converted into a modern forced air heating system by the addition of a Holland Type "A" or Type "B" Air Conditioner.



EXCLUSIVE ENGINEERING FEATURES

Construction—All castings made of Hollandized Iron, particularly developed for furnace use. Minimum number of sections, with wide and deep cup-joints to provide for necessary expansion and contraction—all joints sealed with special Holland cement. Dust-proof casing has terne plate inner liner and insulated hood to reduce radiation losses.

Radiator—One-piece casting with automatic damper permitting only one-way flue gas travel. Doubles heat extraction by causing *all* the hot gases to travel *entirely around* the radiator passage. Damper opens during firing period to send cold air directly to chimney, preventing the radiator from chilling. Clean-out door acts as automatic pressure release to protect castings.

Combustion Chamber—One-piece casting, extra large to insure complete burning of gases and provide additional heating surface. Integral water coil recess allows ample space for firing.

Fire Pots—Made in two sections to overcome unequal expansion and contraction. Lower section cast with patented self-cleaning air cells which admit preheated air and promote burning next to casting where maximum heat transfer occurs.

Grate—One-piece, cone-shaped casting operating on roller bearings. Narrow air slots handle fine coal without waste. Entire grate may be tilted downward to facilitate clinker removal.

Shaker Attachment—Upright shaker outside the furnace permits ashpit door to remain closed while grate is being rotated to remove ashes. Eliminates dust and fumes when cleaning fire. Obsolete shaker "crank" still used on many other furnaces.

Ash Pit—Large and roomy with no grate frame obstructions. Concave base plate holds overflow from humidifier to dampen ashes. Leakproof joint at base plate prevents ash dust from entering air chamber.

Humidifier—Cast as integral part of ash pit section in the form of a shallow cascade. Receives constant supply of fresh running water to insure proper humidity at all times. Overflow dampens ashes to allay dust.

Return Air Accelerators—Conserve basement space and increase air circulation through furnace.

Guarantee—All castings covered by five-year *unconditional bond* in addition to guarantee of satisfactory heating service.

RATINGS AND SPECIFICATIONS

Furnace No.	Capacity at registers B.t.u./hr.	Maximum leader area gravity—sq. in.			Dimensions—inches					Recommended flue size, in.	Total weight, lbs.
		1-story	2-story	3-story	Fire pot diam.	Casing diam.	Overall height	Smoke Pipe	*Flue outlet		
37 A	50,000	450	350	300	19	37	64	8	45	8½ x 8½	980
40 A	61,000	550	450	370	21	40	65	8	46	8½ x 8½	1085
45 A	76,500	690	560	465	24	45	66	8	46	8½ x 8½	1245
50 A	98,000	885	720	590	27	50	69	9	47	8½ x 13	1500
60 A	140,000	1250	1030	850	32	60	69½	9	48	13 x 13	2000

*Height from floor to center of flue outlet.

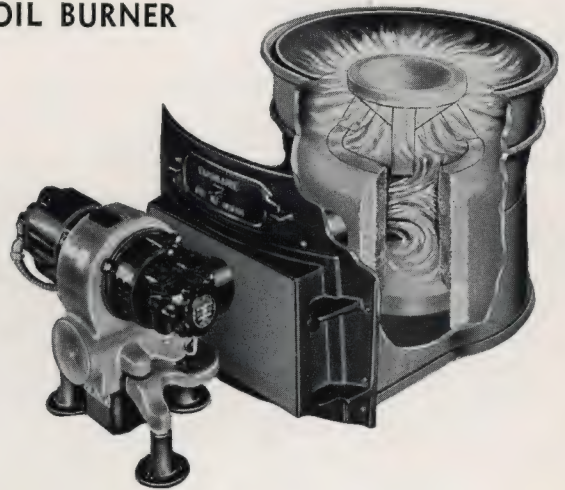
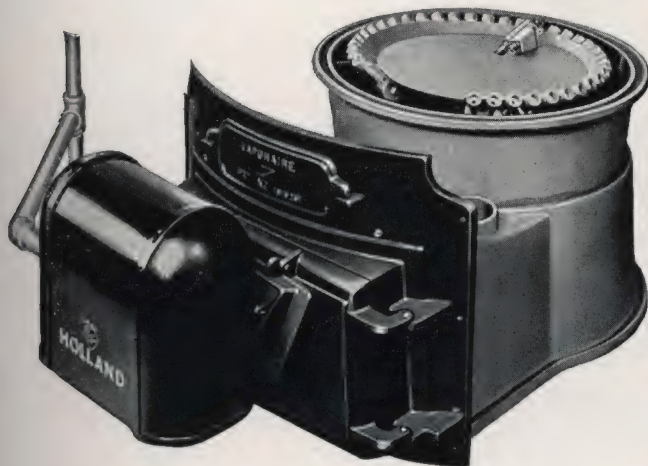
HOLLAND AUTOMATIC HEATING ACCESSORIES

The equipment shown on this page enables the home owner to convert his present warm air, hot water, or steam heating plant into a modern automatic heating system at a very small cost. His choice of the type of equipment to be added may be governed entirely by indi-

vidual preference and local fuel costs, since each of the burners—whether it be fired by oil, gas, or stoker coal—will operate at a reasonably high efficiency in addition to providing the convenience, safety, and cleanliness offered by automatic firing.

HOLLAND CONVERSION OIL BURNER

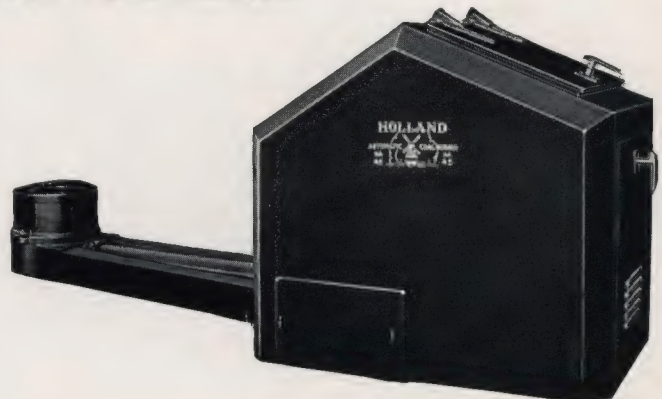
Utilizing a slow-speed, direct-drive motor and two-stage fuel pump, the Holland Oil Burner atomizes the liquid fuel into a fine mist so that complete combustion is assured. Although it is designed to burn low-cost No. 3 fuel oil, No. 2 or No. 1 may be used equally well. The burner is furnished in a variety of sizes, with capacities ranging from 1.0 to 2.5 gals. of oil per hour. A special precast combustion chamber, complete with a patented cone baffle to spread the flame over the casting surfaces, is used on every installation. Standard control equipment includes a safety device to protect against ignition, flame, or power failure, a limit control to safeguard heating plant, and a thermostat regulating room temperatures. Burner is approved by National Board of Fire Underwriters, New York Board of Standards & Appeals, and all cities requiring approval.

**HOLLAND CONVERSION GAS BURNER**

Available in five sizes with input capacities ranging from 95,000 to 300,000 B.t.u. per hour, and suitable for use with natural, manufactured, or mixed gas, the Holland Gas Burner meets the requirements of any domestic application. It is unique in that it eliminates the use of all insulating refractory baffles, since the patented vacuum-cup jets impinge the flame directly against the heating surfaces, where immediate, maximum heat transfer is assured. A dependable motorized gas valve regulates the operation of the burner at the demand of a room thermostat, while the air-cooled safety pilot causes an immediate shut-down to safeguard the equipment in the event of flame failure. The burner requires no attention once the pilot has been lighted at the start of the heating season. Listed as standard equipment by the American Gas Association.

HOLLAND BITUMINOUS COAL BURNER

By employing an adjustable ratchet-type transmission, the capacity of the Holland Automatic Coal Burner may be varied from 8 to 40 lbs. of coal per hour simply by changing the position of a small gearshift lever. The coal tube assembly is furnished in two different lengths so that the hopper may be placed as close to the heating unit as possible. A new and improved air volume control automatically regulates the condition of the fire in accordance with the fuel rate. A special by-pass arrangement, cast in the retort, admits air under pressure to the conveyor tube, preventing hopper smoke. The large, 400-lb. capacity hopper permits longer periods between refillings. Control equipment includes a time relay to maintain a pilot fire during mild weather, a limit control to safeguard the heating plant against excessive temperatures, and a room thermostat.



HOLLAND FURNACES MAKE WARM FRIENDS



WORLD'S LARGEST INSTALLERS
of HOME HEATING and
AIR CONDITIONING SYSTEMS

• HOLLAND FURNACE COMPANY •

LOCAL BRANCH OFFICE

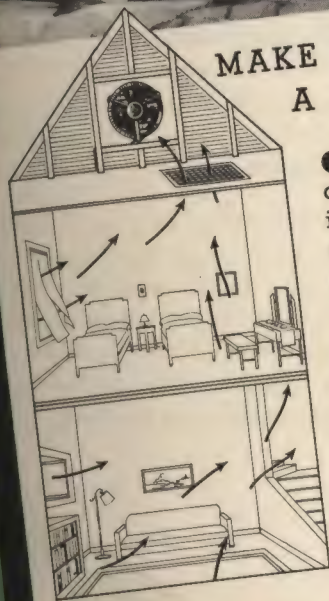
In Your Home You'll Surely Want ILG ELECTRIC VENTILATION

COOL

your whole house with the
ILGATTIC SYSTEM



**MAKE EVERY BEDROOM
A SLEEPING PORCH**



Arrows indicate movement of air which flows in through open windows . . . circulates in every room . . . travels up to the attic where it is forcibly exhausted by the ILGATTIC Fan.

● Sleep in a room that's cool as all outdoors—awake feeling rested and refreshed—enjoy the comforts of an *Ilg* air-cooled home for an operating cost of only a few cents a day.

Note how the *Ilgattic* System removes the blanket of hot, stagnant air from your sun-baked attic and creates a positive circulation of fresh air—upstairs and down. Out goes the hot, stuffy air . . . in comes cool, refreshing night air. Thoroughly cooled at night, your home is more comfortable and healthful during the day.

... Rid your home of
COOKING ODORS and GREASY FUMES
WITH AN **ILG ELECTRIC KITCHEN VENTILATOR**



● Keep your home spick and span with an *Ilg* Electric Kitchen Ventilator. It whisks away objectionable kitchen smells and greasy fumes before they have a chance to go trailing through the house . . . lightens cleaning tasks . . . saves decorating expense. Upstairs and down, your home is more inviting. In winter and summer your kitchen is a joy spot . . . And it's so easy to install an *Ilg* Electric Kitchen Ventilator in a wall, window or transom. Operating cost is only a few cents a day—no more than an ordinary light bulb.

ILG

ILG ELECTRIC VENTILATING CO.

2807 N. CRAWFORD AVE., CHICAGO, ILL.

VENTILATION
and Air Conditioning

Modern Housekeeping Calls for an ILG KITCHEN VENTILATOR

Whether yours is a large or small home—new or remodeled—owned or rented, you should have an Ilg Electric Ventilator in the kitchen.

● Peek in the window of any of the numerous new homes and apartments being erected, and you'll usually find electric ventilation. Most often, it's Ilg.

With an Ilg Electric Ventilator installed in the kitchen, all cooking odors, steam, and excessive heat are quickly exhausted—whisked outdoors as fast as they arise from the stove. There's no tell-tale broadcasting of your menu—no embarrassing odors invading the rest of your house.

Ilg Electric Ventilation in your kitchen makes the whole house more inviting. Out go tobacco smoke and stale air. You never have to worry about greasy fumes soiling your walls, woodwork, furniture or drapes. This means less cleaning, less decorating expense.

Top picture shows a permanent, built-in-the-wall installation. Center view illustrates window installation of a portable Ilg Electric Kitchen Ventilator.

Above is a close-up of Portable Ilg Kitchen Ventilator. Adjustable panel permits ventilator to be easily installed in any ordinary window. See your electrical dealer or write for free booklet. Ilg Electric Ventilating Co., 2807 N. Crawford Ave., Chicago.

ILG
VENTI
and Air C

**ILG ELECTRIC
VENTILATION
in Your Kitchen
Means Less
Work for You,
Less Expense
for Decoration**

**ILG
FULLY ENCLOSED
SELF-COOLED MOTOR**

**ONE-PIECE METAL
WEATHER-TIGHT
DOOR**

**ADJUSTABLE CABI-
NET—8" to 24"
SPREAD**

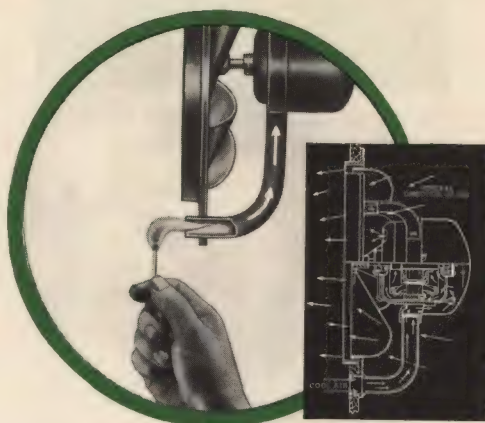
**ALUMINUM ALLOY
MIRROR FINISH
GRILLE**

**CERTIFIED RATING
CAPACITY 500
CFM**

**AUTOMATIC MER-
CURY PULL
CHAIN SWITCH**

Here's why the Nation's Model Homes Feature **ILG ELECTRIC KITCHEN VENTILATORS**

● With many distinctive features to recommend it, the Ilg Kitchen Ventilator is first choice in model homes from coast to coast. It's the one favored by prominent builders, recommended by architects and engineers. Designed for both small and large kitchens, the Ilg line is unquestionably the most complete made; various models, sizes, and capacities for permanent and portable installations in wall, window, or transom.



DEMONSTRATING THE ILG SELF-COOLED MOTOR

Light a match, hold it near the vent pipe opening of the Ilg Electric Ventilator. Instantly, the flame is drawn into the vent by the air current created by the action of the fan. This positive flow of air reaches the heart of the motor, increases efficiency, insures long life.

When you buy or specify an Ilg Electric Ventilator, you choose the only one made with a fully enclosed, self-cooled motor—an exclusive, patented feature. It's truly quiet in operation.

Ilg Electric Ventilators are the ones you see in famous hotels, cafes, and clubs all over the world. They're known everywhere by name and performance... made, tested, sold, and guaranteed under the single nameplate of a pioneer manufacturer—one responsibility!

Air capacities of Ilg Electric Ventilators are rated according to standard codes of the American Society of Heating and Ventilating Engineers and the National Association of Fan Manufacturers.

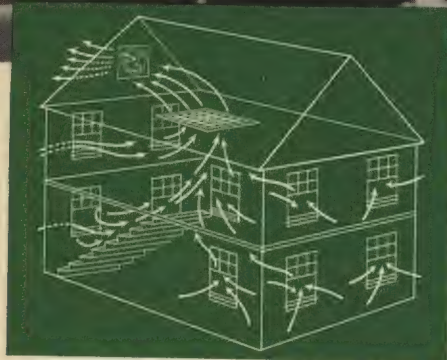
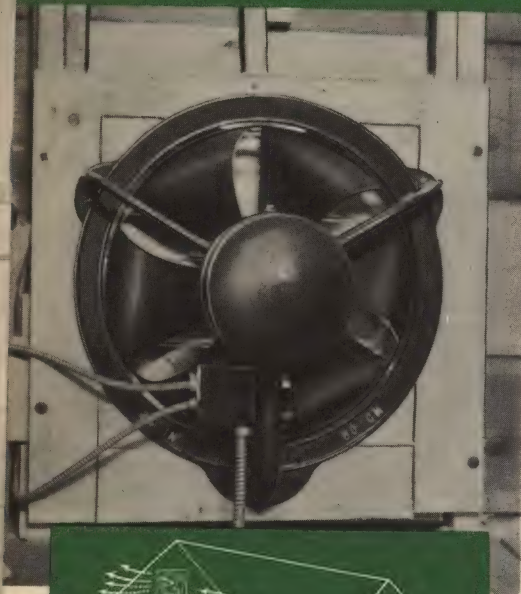
SEND FOR *Free* ILLUSTRATED BOOKLET!

Interesting facts about Ilg Electric Kitchen Ventilation... complete descriptions of each model... pictures of typical installations. Valuable information for every housewife and home builder—Ilg Electric Ventilating Company, 2807 North Crawford Avenue, Chicago, Illinois.



ATION
ditioning

It's so Easy... So Effective **COOLING** *Upstairs and Down* *with the ILGATTIC SYSTEM*



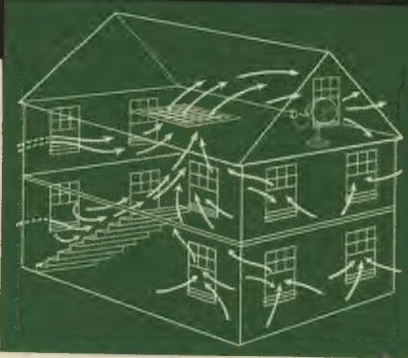
PERMANENT TYPE . . . Showing Ilgattic Fan installed in end of attic wall or in dormer.

● The Ilgattic System provides delightful housewide air circulation . . . chases out the heat . . . flushes out the stagnant air in the attic . . . ventilates every room.

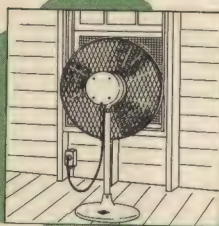
Both permanent and portable equipment are available . . . fully described and illustrated in the Ilg Condensed Catalog, sent free on request.

Made by a nationally-known manufacturer, Ilg attic cooling fans are powered by the dependable Ilg self-cooled motor—direct connected . . . no noisy belts or gears . . . no fire hazard—guaranteed as a complete unit.

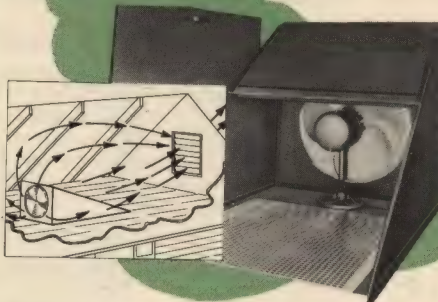
ILG attic fans have two speeds; the higher speed for extra air volume for faster cooling in the evening; the lower speed for maximum quiet for all-night operation.



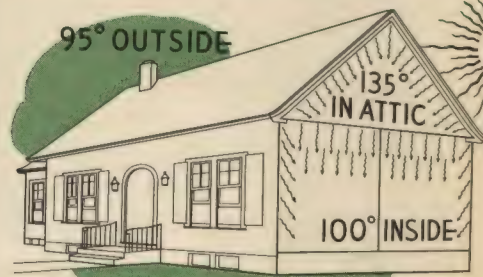
PORTABLE TYPE . . . Showing Ilgwind Attic Fan placed at open window. No installation is required.



Close-up view of Ilgwind Attic Fan placed at open attic window. No window connection or special wiring is required.



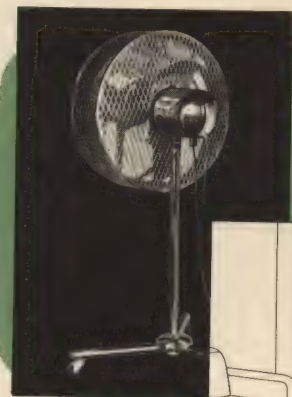
Southern type Ilgwind Attic Fan, made with short stem for use in suction box as illustrated. Recommended where attic construction is open. Sold with or without box.



Exposed to the scorching sun all day long, your home becomes a heat reservoir where attic temperatures often reach 135°



At night, the outdoor temperature usually drops to a moderate level, but the bake-oven heat in your attic keeps the house hot.



ILG-ROLLAIRE
New, portable, high-volume fan for night air cooling of homes and apartments.



This quiet, high-capacity, ventilating fan can be easily rolled up to any open window and plugged in for immediate operation. No window connection is needed.



VENTILATION
and Air Conditioning

ILG ELECTRIC VENTILATING CO.
2807 NORTH CRAWFORD AVENUE, CHICAGO, ILL.

IN-SINK-ERATOR CO.

Manufacturers of Electrical Garbage Disposal Units
RACINE, WIS.

THE MODERN METHOD TO DISPOSE OF FOOD WASTES

The Need of Improved Method

The unsanitary, inconvenient garbage can was never more than a makeshift. It did not dispose of food wastes but was only a storage unit between the kitchen and some means of disposal. It bred germs and attracted vermin and was a general nuisance.

If kept indoors its contents rapidly decayed and became highly objectionable; if kept out of doors, there was little improvement and added inconvenience.



How IN-SINK-ERATOR Meets the Need

Immediate permanent disposal at the kitchen sink is given by the IN-SINK-ERATOR. Not crockery or metal but all food wastes, including bones, fruit pits and ash tray contents disappear down the drain at the turn of a switch. Material is dropped in the container and disposed of immediately, avoiding

accumulation. The Research Laboratories of three of the major manufacturers of electrical and kitchen appliances have made tests of the IN-SINK-ERATOR and approved of it as being a practical appliance.

WHAT THE IN-SINK-ERATOR IS AND DOES

General

The IN-SINK-ERATOR is an electrical appliance for the disposal of food wastes, and can be installed in any kitchen sink. It provides a drain opening to receive food wastes to be disposed of.

The unit consists of a sink drain flange, drain cover with stopper, removable safety feed spout, resilient mounting flange, shredding compartment with a drain by-pass, rotor shredder, motor, flexible switch control and adjustable wall brackets with resilient mounting.

Operation

In operation, food waste is placed into the unit, a moderate stream of cold water is turned on from the sink faucet, the switch control is turned, and contents immediately communicate with the impellers and steps on the top surface of the rotor shredder, forcing contents outwardly against the "V" shaped shredder on the inner wall of container, thereby large pieces are reduced and forced downwardly into the shredder feed grooves which further shred the contents into minute particles or pulp which is readily carried down the sink drain into the sewer by the water and action of the rotor shredder.

Capacity

The IN-SINK-ERATOR has an unlimited capacity while in operation.



Safety Feature

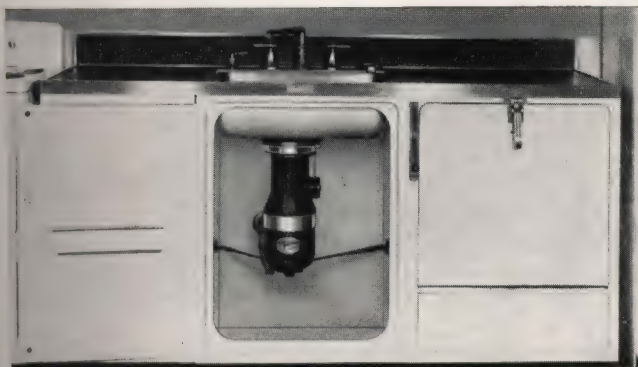
The safety feed spout prevents any possibility of danger through contact when the drain cover is removed and food waste is placed in the container while the unit is in operation. It feeds without aid.

Sanitary Advantages

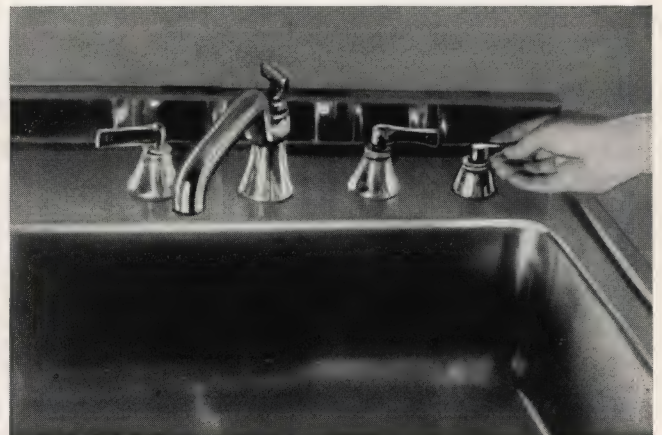
Use of the IN-SINK-ERATOR keeps the drains clean and open due to small particles of food waste of a gritty nature which, under pressure, scour the interior of the drain pipe. This prevents accumulations of greasy, soapy materials which usually clog drains. The IN-SINK-ERATOR is self feeding and self cleansing. It eliminates wrapping and handling of garbage; or storing in kitchen receptacles and garbage cans with their unsanitary, unhealthy, and disagreeable conditions.

When Installed

The IN-SINK-ERATOR is compact and requires little space. It is finished in black, trimmed with two polished aluminum bands, and is neat in appearance. So simple and safe is its operation that any member of the family may use it without danger to the operator or to the unit itself.



Complete Installation



Switch Control on Sink Deck

CONSTRUCTION

Shredding Elements—The shredding elements of the IN-SINK-ERATOR are made of high-grade nickel iron especially treated. Shredder and shredder feed grooves are at the lower end of the container body, and so arranged in conjunction with the rotor shredder that the same efficiency is obtained in either direction of rotation. The rotor shredder, being a fly wheel in effect, is equipped with impellers on the lower surface, which provide a pumping action of the shredder waste into the drain.

Switch and Control—The unit is equipped with a chain-pull reversible, heavy duty switch and is so arranged, automatically, that each time the switch is turned on, the motor runs in the opposite direction with the same efficiency in either direction of rotation. This reversal of direction doubles the life and adds to a self-sharpening feature to the shredders, and is also equipped with an overload relay.

The switch control, which is a handle, is so flexible in arrangement that it may be installed on the deck or splash of the kitchen sink, or on the front of a cabinet, or any other convenient location for the operator, at no additional cost.

Electrical Connections—Connection is made from the switch box located on the container body. Provisions are made in the cover for a 3 wire BX cable clamp. Wiring is to be done as per codes and approved methods of connecting a ¼ horse power motor to house wiring circuit.

Plumbing Connection—The drain outlet of the unit is for a slip-joint connection of the ordinary 1½-in. trap (trap not furnished) which is connected to the sink drain line, preferably 2-in. line. Installation and operator's instructions are furnished with each unit.

INSTALLATION

The IN-SINK-ERATOR will fit any kitchen sink having a drain opening from 3½ in. to 4¼ in. in diameter. Smaller or larger openings can be fitted upon special request. Installation is simple; the top of the unit is screwed on to a threaded portion of the flange placed in the drain of the sink. The drain outlet is then connected to the trap, and the two adjustable braces are run from the bottom of the unit to the wall, at right and left angles. Electrical connection is made and switch control installed. This unit will function equally as well through drum traps, grease traps and septic tanks.

GENERAL INFORMATION

Guarantee—The IN-SINK-ERATOR carries a one-year guarantee against faulty workmanship and materials. Its sturdy construction and automatic reversal of the motor each time it is used assure long-life and trouble-free operation.

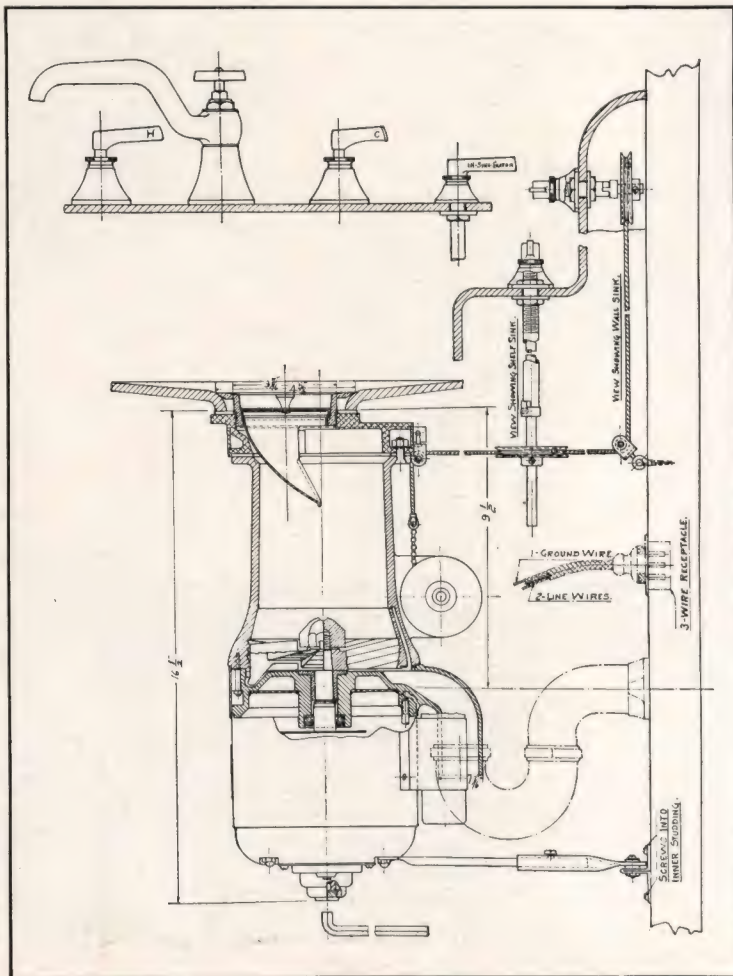
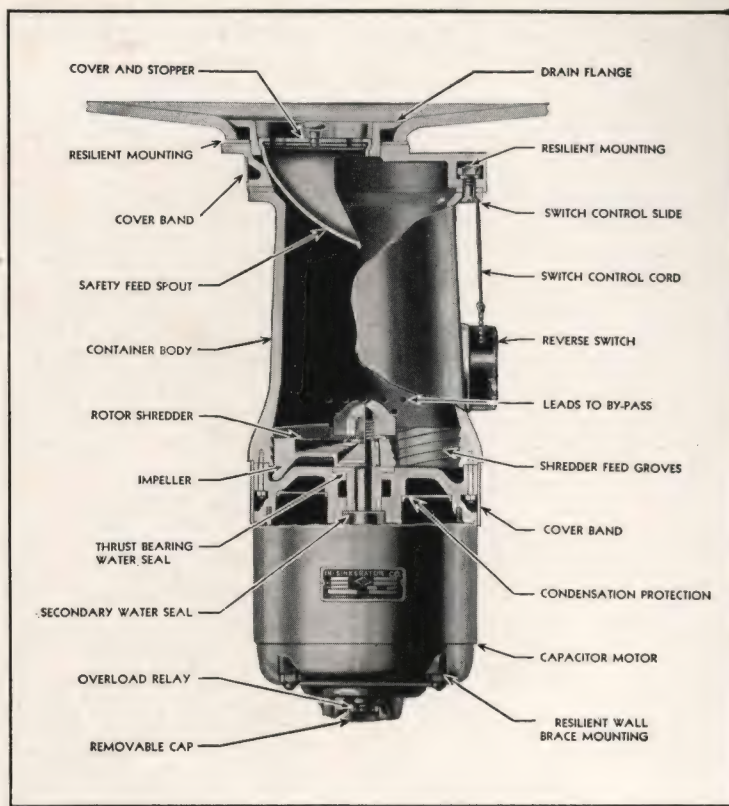
The IN-SINK-ERATOR can be purchased through the regular plumbing channels, or we will furnish information as to dealers in various locations upon request.

SPECIFICATIONS B-100

Net Weight	45 lbs.
Capacity	Unlimited
Switch	6 pole Reversible
Motor—Capacitor Type	¼ HP, 1,725 RPM
Motor Current A.C.	110 volts, 60 cycles, 5.5 amps
Motor Bearings	Permanently Oiled
Motor Time Rating	Continuous

Note—Other motor requirements can be met.

REPRINT
SWEET'S CATALOG FILE
1940



Especially for **Small Homes**

*Automatic
Air
Conditioning*

The
**NEW
"90"**



*Oil
Burning*

**SUPERFEX
FURNACE**

 **PERFECTION STOVE COMPANY**

SUPERFEX

oil burning

air conditioning

MODEL 90

SUPERFEX MODEL 90 Oil Burning Air Conditioning Furnace is the economical and efficient answer to the problem of heating modern small homes. Occupying an absolute minimum of floor space, (actually less than two feet square at the base) it nevertheless is a full sized furnace, so far as heating ability is concerned, for any home requiring up to 70,000 B. t. u. output.

A sturdy blower, capable of moving 1000 cubic feet of air a minute, is built into the base of this compact unit, and is automatically controlled.

This equipment will provide additional comfort in the Summer. By means of a special built-in Summer switch, the blower may be used with all of the regular controls shut off. This provides effective constant circulation of air which greatly modifies Summer heat.

The Superfex combination mechanical and natural draft burner has automatic two-stage controls, which assure economical uniform heating by regulation of the fire from high to low, but never completely out. When the thermostatic controls switch to the high fire, the blower goes into operation. When the fire is turned to low, circulation of heat is by gravity.

Because the fire never goes completely out, as would be the case in an old-fashioned "on-and-off" furnace, the heating system never goes cold, never has to be reheated when the thermostat calls for high fire. There is *always* some heat in circulation. The result is more even temperature throughout the heating cycle — no sharp drops or sudden rises.

This efficient little furnace conditions air as it heats. A large air filter in the return air opening removes dust, soot and germs, as the air is drawn in for reheating. After heating, the air is effectively humidified. The humidifier is of the drip type, with a stainless steel evaporator. It is connected directly to a water supply pipe and requires no filling. Because it is especially designed for efficient heating of the most modern type of low-cost small homes, the Model 90 Superfex is unusually adaptable. It may be installed in basementless homes, in a small heater-room with short duct connections to adjoining rooms, or in a basement with warm and return air ducts.

Installation is both quick and easy. As the furnace comes from the factory completely set up and with all controls completely wired, no special talent or equipment is required. When the furnace has been placed and the simple duct work attached, a 110-volt connection to the furnace control panel and a low voltage connection to the thermostat is the only wiring necessary.



This house is typical of the small modern homes for which the New "90" Superfex Oil Burning Air Conditioning Furnace was especially designed. Whether it be a house with basement, like this one, or one with no basement, in which a small heater room is used, this Superfex makes an ideal installation. It is designed to be adapted to either type of installation without structural alterations.

Note the neat and attractive installation the New "90" makes in the basement of this small home. Economy of floor space is one of the important items in equipment for such a home. This Superfex occupies a space less than two feet square on the floor, yet does a thorough, efficient, dependable job of heating and air conditioning. Neatly tailored duct work like this is typical Superfex installations.

The Mark



of Quality

MADE
STOVE

One method of Superflex Model 90 installation in the heater room of a small house with no basement is shown above. To save floor space, the "economizer" here is installed in the warm air plenum chamber.

SPECIFICATIONS

MODEL NO. 90

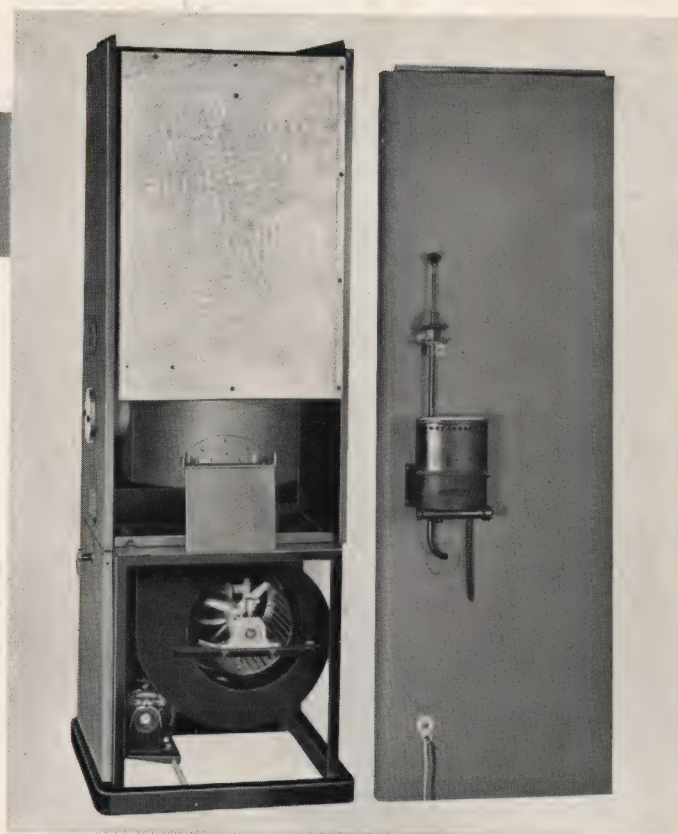
Heating Capacity — B. t. u. at Bonnet	70,000
Maximum Fuel Consumption	.65 Gal. Per Hr.
Operating Efficiency	78%
Fuel	No. 2 Fuel Oil
Dimensions:	
Width	23¼"
Length	23¼"
Height	68"

Note: Provision must be made for installation of radiator in warm air plenum or in return air duct

Outer Casing	20 gauge
Finish	Orange-red and Black Wrinklelac Enamel
Flue Outlet Diameter	6"
Draft Regulator	Automatic Balanced
Humidifier	Drip, with stainless steel evaporator
Automatic Controls	Superfex Thermostat
	Factory wired and built-in limit control
	Factory wired and built-in combination high-low oil and single speed blower control.
	Factory wired and built-in summer switch
	Oil valve—electric assembly mounted on right side of unit. Not available on left side.
Burner	Superfex combination mechanical and natural draft oil burner.
Blower	Superfex 1000 CFM belt drive, ½ HP single speed motor—110-volt, 60-cycle, single phase, alternating current. Factory wired and mounted in position.
Warm Air Opening	20½" x 20½"
Return Air Opening	Front or rear—25" x 20" Base 20½" x 20½"
Filters	1—25" x 20" x 2" removable
Shipping Weight	Approximately 400 lbs.

Listed as Standard by Underwriters' Laboratories.

SUPERFEX
Oil Burning
AIR CONDITIONING FURNACES
are made by
PERFECTION STOVE COMPANY



Note that the radiator, the humidifier and the filter casing are not shown above although they are furnished with each furnace.

Seeing a Superfex Model 90 Oil Burning Air Conditioning Furnace in action and noting its efficient operation, home owners often have been moved to ask . . .

"How do you get so much into so little space?" The illustration above shows the answer.

With a side panel detached, you can see the solidly built "squirrel cage" blower and its heavy duty ½th horsepower motor, located below the burner and combustion chamber. This is no mere fan, but a real furnace blower that will move up to 1000 cubic feet of air a minute. A removable lower panel which fits the casing either in front or rear permits ready access to the blower and motor. The return air opening to which the filter housing attaches is usually in the rear. In special cases the return air can be taken through the front or the bottom of the furnace.

The combustion chamber is of sheet steel, supported by a solid angle-iron frame. The convenient location of the lighter opening (covered by the chrome plated cap in front) is shown. Just above it is a fire-resisting glass disc through which the fire may be observed.

Notice the heavy galvanized inner lining which prevents waste of heat by radiation, and the compact construction of the whole furnace frame. The humidifier is located on top of the combustion chamber, not visible when the inner lining is in position.

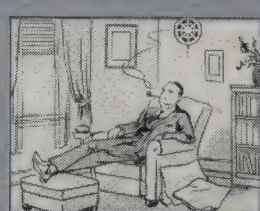
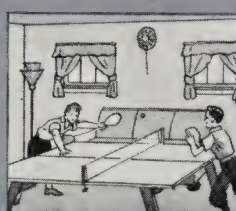
The outer casing is finished in orange-red Wrinklelac Enamel, and as shown, all controls are mounted in a compact unit on the right side panel. Detailed specifications are listed in the columns at left.



VICTOR

In-Built

VENTILATORS



VICTOR MAKES LIVED-IN ROOMS MORE LIVABLE

List Prices

(write for your discounts)

VICTOR In-Bilt VENTILATORS

VICTOR DeLUXE\$55.00

Model VT-28X: 12" diameter blades, complete unit, including grille, louvers & wall sleeve for walls 5½" to 9". Shipwgt. 28 lbs. Code - "JITAK".

VICTOR STANDARD\$24.95

Model VS-30: 10" diameter blades, complete unit, including grille, louver & wall sleeve for walls 5½" to 9½". Shipwgt. 16 lbs. Code - "JABEW".

Model VS-31: Same specifications as above except for walls 9½" to 13½". Shipwgt. 16 lbs. Code - "JANPA".

VICTOR MASTER\$19.95

Model VS-32: 8" diameter blades, complete unit, including grille, louver & wall sleeve for walls 5½" to 9½". Shipwgt. 10 lbs. Code - "JACUM".

Model VS-33: Same specifications as above except for walls 9½" to 13½". Shipwgt. 10 lbs. Code - "JEDAY".

VICTOR PANEL-AIRE\$20.95

Model VS-34: 8" diameter blades, complete unit, including grille, louver & sash panel (11" x 11" min.) with standard panel size 11⅞" x 12". For panel sizes other than standard in lots less than 100, add \$1.50 to list price. For use in windows, transoms on any place where a panel opening exists. Shipwgt. 11 lbs. Code - "JORCA".

Extension Sleeves with straps for use with In-Bilt Ventilators in oversize walls:

Model 33-1: Use with VS-33 for walls 13½" to 21½". Shipwgt. 3 lbs. Code - "JUGEB". Price90¢

Model 33-2: Use with VS-33 for walls 21½" to 30". Shipwgt. 5 lbs. Code - "JIRAD". Price90¢

Model 31-1: Use with VS-31 for walls 13½" to 21½". Shipwgt. 4 lbs. Code - "JANUT". Price90¢

Model 31-2: Use with VS-31 for walls 21½" to 30". Shipwgt. 6 lbs. Code - "JANTE". Price90¢

Model 28-1: Use with VT-28X for walls 9" to 17½". Shipwgt. 6 lbs. Code - "JULET". Price.....\$1.00

Model 28-2: Use with VT-28X for walls 17½" to 26". Shipwgt. 10 lbs. Code - "JECUP". Price\$1.00

NOTE: Extension sleeves for thicker walls can be had on special order.

VICTOR ELECTRIC PRODUCTS, Inc.

3200 - 3400 ROBERTSON ROAD
CINCINNATI, OHIO

Quality is
always VICTOR

Quality is
always **VICTOR**



VICTOR *DeLuxe*

MODEL
VT-28X
12" Blades

The Victor DeLuxe is the perfect home ventilator . . . with outstanding features for the most particular builder and architect.

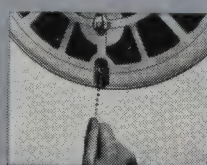
It is quality built throughout. It has three-speed control, automatic operation, hinged grille for easy cleaning, weather-tight shutters, attractive Silchrome and polished aluminum finish, and a super-power Victor Motor.

This Victor DeLuxe ventilator moves air. When operating at high speed in the average size home, it changes the air on an entire floor several times an hour.

Attractive appearance, outstanding performance, and lasting dependability make the Victor DeLuxe the champion of home ventilators for every type construction.



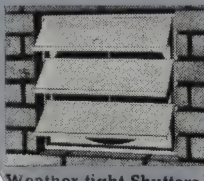
3-Speed Control



Automatic Operation



Easy to Clean



Weather-tight Shutters

SPECIFICATIONS

Interior Grille - 15 1/4" dia.

Outside Panel - 15 5/8" x 15 5/8"

Dia. Wall Opening - 14"

For walls up to 9" - use VT 28X.

For walls 9" to 17 1/2" - use VT 28X and No. 28-1 extension sleeve.

For walls 17 1/2" to 26" - use VT 28X and No. 28-2 extension sleeve.

Blades - Four, quiet type, 12" diameter, aluminum.

Capacity - 800 C.F.M.

Wiring - Adapted to BX or conduit. No extra switch needed.

Motor - Induction type, no brushes, no radio interference. Bearings are bronze, self-aligning, impregnated with oil and graphite.

Current - 110-120 Volts, 50-60 cycle A.C.

Speed - 1350 R.P.M. High

1050 R.P.M. Low

1200 R.P.M. Medium

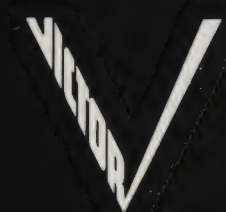
Watts - 70.

Finish - Polished aluminum grille and blades; lustrous Silchrome motor shell; durable hi-gloss Battleship Grey enamel on wall sleeve and louvers.

Shipping Weight - 28 lbs.

Guarantee - One year against electrical and mechanical and manufacturing defects.

Quality is
always **VICTOR**



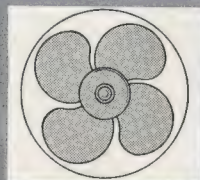
VICTOR *Standard*

MODELS
VS-30, VS-31
10" Blades

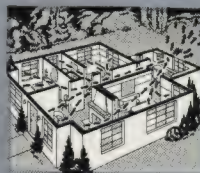
Here is a ventilator that is quick and easy to operate. The Victor Standard is designed to harmonize with modern kitchen appliances. Requiring only 12½" of wall space, it can be installed over cabinets and through walls of any thickness.

A single beaded chain that is a permanent part of the ventilator, controls the automatic operation. By releasing the chain, the outside shutter opens under spring tension and the fan starts. . . A pull on the beaded chain closes the weather-tight shutter and stops the fan.

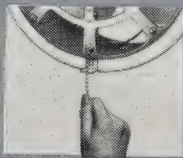
In investment building, Victor Standards in kitchen and bath have definite sales appeal for women. They know these two most used rooms, so equipped, will be more pleasant and healthful.



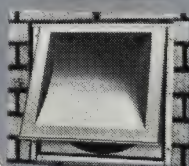
Streamlined, Quiet Fan Blades



Complete Hourly Air Change



Automatic Operation of Fan & Shutter



Weather-tight Insulation

SPECIFICATIONS

Interior Grille - 12½" dia.

Outside Panel - 12½" x 12½"

Dia. Wall Opening - 11¼"

For walls up to 9½" - use VS 30.

Walls 9½" to 13½" - use VS 31.

For walls 13½" to 21½" - use VS 31 and No. 31-1 extension sleeve.

For walls 21½" to 30" - use VS 31 and No. 31-2 extension sleeve.

Blades - Four, quiet type, 10" dia.

Capacity - 600 C.F.M.

Wiring - Adapted to BX or conduit. No extra switch needed.

Motor - Induction type, no brushes, no radio interference. Bearings are bronze, self-aligning, impregnated with oil and graphite.

Current - 110-120 Volts, 50-60 cycle A.C.

Speed - 1550 R.P.M.

Watts - 40.

Finish - Lustrous Silchrome grille, fan blades and motor, hi-gloss Battleship Grey enamel on wall sleeve and shutter.

Shipping Weight - 16 lbs.

Guarantee - One year against electrical and mechanical and manufacturing defects.



Quality is
always **VICTOR**

VICTOR LOW PRICE Master

MODELS
VS-32, VS-33
8" Blades

The Victor Master is a new low-priced ventilator. It brings natural air-control within the reach of everyone. Without sacrifice of ventilation efficiency, quality, or eye-appeal, the Victor Master is built to meet fully the needs of present-day construction of low-cost homes.

Automatic in operation, Victor's super-power motor, Silchrome finished, ornamental interior grille, weather-tight shutter . . . make the Victor Master the perfect ventilator for bathrooms, small kitchens, recreation rooms, or wherever space is limited . . . or where price is a factor to be given paramount consideration.



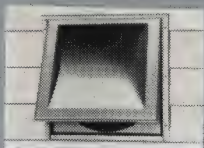
**Cooking Fumes
Move Outside**



**Bathroom Odors
Banished**



**Clean Air for
Clean Fun**



**Weather-tight
Insulation**

SPECIFICATIONS

Interior Grille - 11½" dia.

Outside Panel - 10¼"x10¼"

Dia. Wall Opening - 9"

For walls up to 9½" - use VS 32.

Walls 9½" to 13½" - use VS 33.

For walls 13½" to 21½" - use VS 33 and No. 33-1 extension sleeve.

For walls 21½" to 30" - use VS 33 and No. 33-2 extension sleeve.

Blades - Four 8" diameter.

Capacity - 400 C.F.M.

Wiring - Adapted to BX or conduit. No extra switch needed.

Motor - Induction type, no radio interference, no brushes. Bearings are bronze, self-aligning, impregnated with oil and graphite.

Current - 110-120 Volts, 50-60 cycle A.C.

Speed - 1900 R.P.M

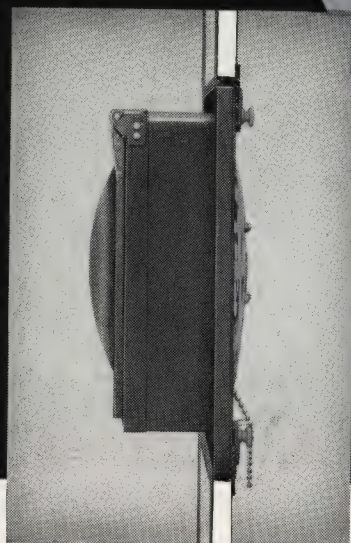
Watts - 35.

Finish - Lustrous Silchrome grille, fan blades and motor, hi-gloss Battleship Grey enamel on wall sleeve and shutter.

Shipping Weight - 10 lbs.

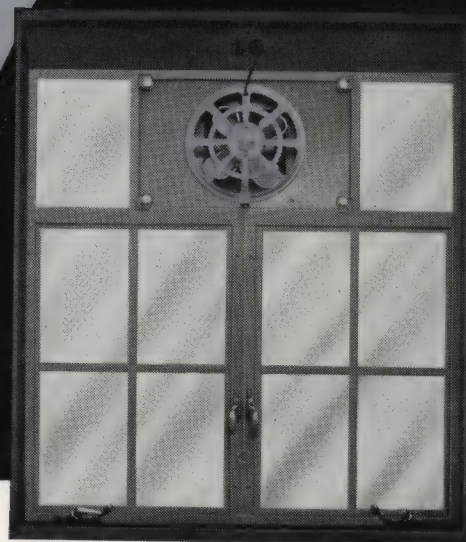
Guarantee - One year against electrical and mechanical and manufacturing defects.

THE *New* VICTOR *Panel-aire* VENTILATOR



Side view of Panel-aire showing flush mounting with Inside of Sash. No interference with Shades.

**Model
VS-34**



Front view of Panel-aire showing easy installation in Steel Sash Window.

The New VICTOR Panel-aire Ventilator

brings to the architect and builder a perfect answer to the problem of room ventilation where openings through the wall are impractical. The Panel-aire is ideally suited for use in newly planned or already constructed homes, apartment houses, etc. It is a self-contained, compact unit — permitting easy installation in steel sash windows, transoms or any place where facilities for a panel opening already exist. The Panel-aire utilizes minimum space, and provides highly efficient and dependable ventilation performance.

COMPLETELY WEATHER SEALED — An outstanding feature of this new VICTOR Panel-aire Ventilator is the complete weathersealing. The panel fits against the outside of the steel sash with rubber cork gaskets, while the ventilator housing is also sealed against the outside panel. The louver interlocks with the outside housing, making it completely air and water tight.

FLUSH MOUNTED INSIDE — The new VICTOR Panel-aire is mounted so as to be flush with the inside of the sash — no interference with shades or Venetian blinds. Sweating is avoided by providing a dead air space between the round inside sleeve and the square outside housing.

FAN AND LOUVER OPERATION SYNCHRONIZED — to provide automatic starting of the fan with the opening of the louver. Closing the louver automatically stops the fan.

MADE TO FIT ANY SIZE STEEL SASH — The VICTOR Panel-aire is a complete, standardized ventilator unit, mounted on a panel which will be made on order any size (11" x 11" minimum) to conform with glass dimensions.

ATTRACTIVE APPEARANCE — Outside housing and panel are enameled in high gloss Battleship Grey, affording an attractive background for the beauty of the fan and grille which is finished in lustrous Silchrome.



Quality is
always VICTOR

SPECIFICATIONS

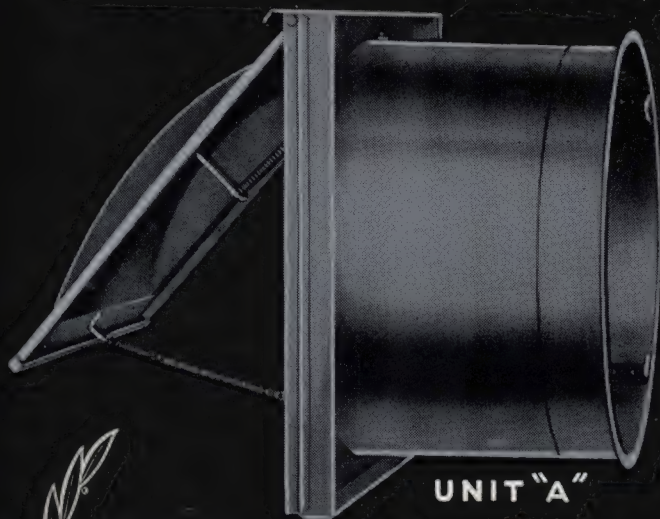
SASH PANEL:	11" x 11" minimum; can be provided up to any reasonable size.
DEPTH:	Face of grille to closed shutter 5 1/4".
BLADES:	Four quiet type 8" diameter.
CAPACITY:	400 C.F.M.
WIRING:	Four-foot Neoprene cord with cap.
MOTOR:	Induction type, no radio interference, no brushes. Bronze bearings, are self-aligning and impregnated with oil and graphite.
CURRENT:	110-120 Volts — 50-60 cycle A.C.
SPEED:	1900 R.P.M.
WATTS:	35.
FINISH:	Silchrome grille, motor and blades. Panel, sleeve and louvers, Battleship grey — acid-resisting, baked-on enamel.
SHIPPING WEIGHT:	11 lbs. (11" x 11").
GUARANTEE:	One year against manufacturing and electrical defects.
PACKING:	In 2 units: (a) Ventilator Assembly; (b) Sash Panel.

THESE

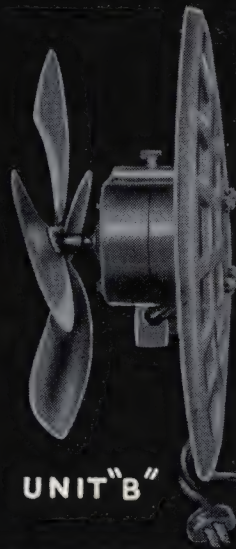
Plus

FEATURES

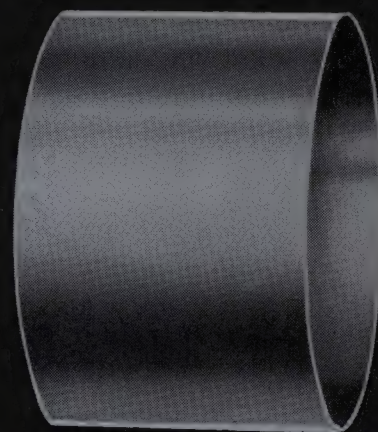
MAKE **VICTOR** TOPS WITH USERS



UNIT "A"



UNIT "B"



EXTENSION SLEEVE

Quality is
always **VICTOR**

TWO UNIT CONSTRUCTION FOR EASY INSTALLATION.

"A" Unit is installed first. It includes wall sleeve and outside shutter assembly. "B" Unit is installed last. It contains motor, fan and grille assembly. It is fastened directly to "A" Unit after necessary electrical connections are made.

EXTENSION SLEEVE. Where walls exceed standard thickness or where ventilator must be installed over cabinets, extension sleeves (with straps) of standard lengths are available.

VICTOR **POWER**

Victor Motors, entirely Victor-built, power all Victor In-Built Ventilator Models and the new Victor Panel-aire Ventilator. Every unit is thoroughly tested before leaving the Victor plant. Your satisfaction is assured.



CONCEALED **WIRING**

All Victor In-Built Ventilators are designed for concealed wiring. The final electrical connections can be made before the ventilator is put in place, since motor, fan and grille are one unit, installed last.

and these "Extra Plus" **VICTOR VALUES**

GUARANTEED

All Victor In-Built Ventilators and the new Victor Panel-aire are guaranteed for one year against electrical and manufacturing defects.

Easy to Clean

All models are built for easy cleaning. No muss or fuss of taking apart ventilator and re-assembling after cleaning. It's simple.

AUTOMATIC

Operation is controlled by a single beaded chain. Releasing chain opens shutter and starts fan, pulling it closes shutter and stops fan.

A recreation room
where smoke goes
out via a Victor
In-Bilt

A living room,
where living is more
pleasant because of
a Victor In-Bilt

A kitchen where
cooking fumes move
outside via a Victor
In-Bilt

A Victor In-
Bilt banishes
bathroom
odors

Kitchen fumes go out-
side in this Victor
In-Bilt kitchen

A Victor In-Bilt
installed over cabinets
in this kitchen

A basement made more livable
and usable with a Victor In-Bilt

VICTOR

VICTOR ELECTRIC PRODUCTS, INC.

CINCINNATI, OHIO

Weil-McLain

Radiant Comfort

HEATING



WEIL-McLAIN COMPANY

641 W. Lake Street, Chicago

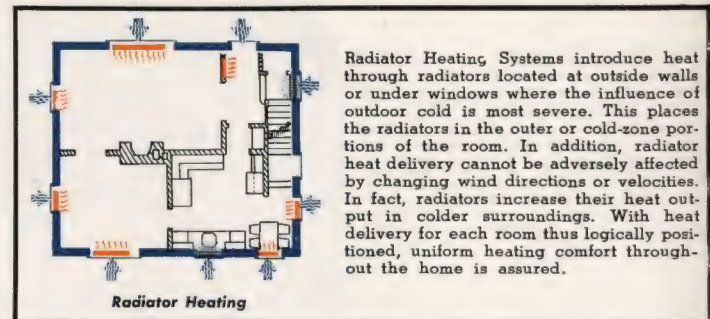
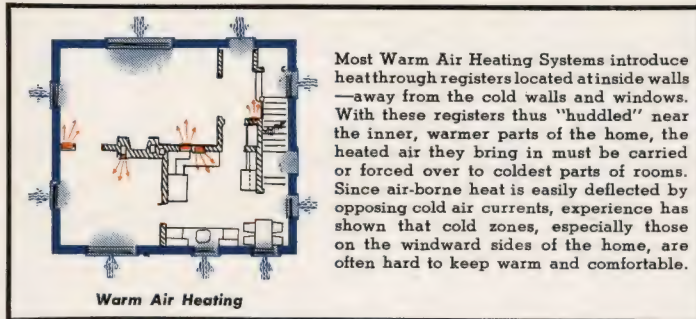
501 Fifth Ave., New York

Factories at Erie, Pa. and Michigan City, Ind. • Distributors in Over 75 Cities

Study This Contrast in Heating Methods

In winter the home is entirely surrounded by cold air pressing against outer walls and windows on all sides. The chilling effect of this penetrating cold is naturally most severe upon those parts of the rooms nearest cold walls and windows. The

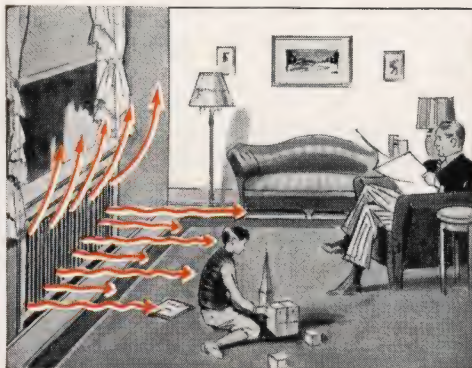
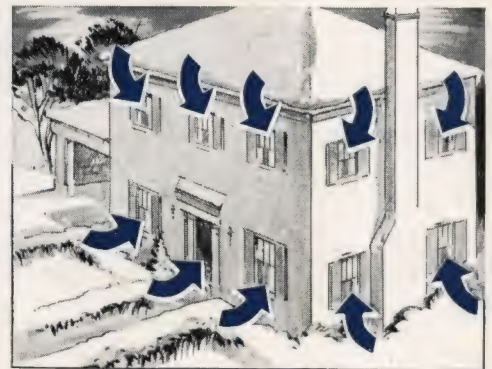
sketches below show two typical methods by which homes today are commonly heated. Note carefully *where heat is introduced* into the rooms. Note, too, the probable effect of such location upon heating comfort.



With Weil-McLain Radiant Comfort Heating You Meet Cold Where Cold Comes In

MOST COLD COMES IN AT THE WINDOWS

Windows are the chief source of cold in any home. Cold, wintry blasts beating against sashes and panes send penetrating cold air into every room. With ordinary heating methods, window zones are always chilly zones. Cold air seeping through windows moves downward, causing unhealthy cold air and dangerous drafts at floor levels. Radiators placed beneath windows *meet cold where cold comes in*.



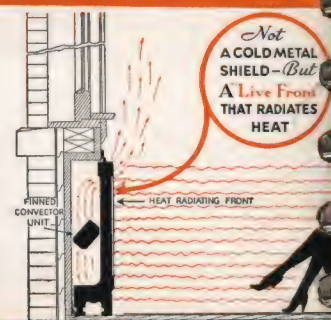
NEW COMFORT AT CHILLY WINDOW ZONES

Note in the illustration at left how the radiator stands guard to prevent unwarmed air from reaching the floor and how its convected heat rises from the radiator to form in front of the window an invisible yet effective "curtain" of warmed air. At the same time, radiant, sunlike heat from the Weil-McLain concealed-type radiator sends comforting, healthful warmth to lower floor levels, where extra heat is always desirable.

A Scientific Blend of Two Kinds of Heat

Weil-McLain Radiators are designed to effectively combat cold with two kinds of necessary heat—convected heat to meet cold where cold comes in and provide moderate undisturbing air circulation *plus sunlike, radiant heat*.

Radiant heat travels out into the lower occupied portion of a room to raise the floor temperature—to give you more heat near your feet. Note this sunlike heating action in the illustration at right.





Weil-McLain

Radiant Comfort Heating

Gives You Sunlike Warmth

The sun is a huge "radiator" that radiates thermal energy (radiant heat) to the earth. Weil-McLain Radiators are small "suns" because, like the sun, they too radiate sunlike warmth. This direct, sunlike warmth gives to radiator heating a degree of comforting, amiable heat not obtainable with methods that cannot supply radiant heat.

Design your heating system to use radiators—small "suns" that can be placed under windows to meet cold where cold comes in. So that menacing floor drafts will be effectively eliminated and comforting, uniform warmth assured, be sure your home has two kinds of necessary heat—convected heat and sunlike radiant heat. To be sure of securing both, choose your radiators from the complete Weil-McLain line.

Stored Heat Is Important

Weil-McLain Radiators meet *all* these requirements—and more. Today when more and more home owners are turning to the freedom of automatic heat, Weil-McLain Radiators bring added comfort—because of *their remarkable ability to store heat*. They give off pleasant warmth even after the thermostat "shuts off" . . . a feature that contributes to more uniform room temperatures and adds greatly to the convenience of automatic heat.

Lower Cost With Mixed Installations

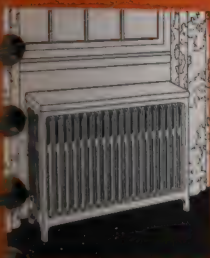
Occasionally building limitations or other reasons may prevent the use of concealed-type radiators in every room. Such restrictions need never cause the home owner to deny his family the sunlike comfort of Weil-McLain "Concealed" Radiators . . . for the advanced design and scientific construction of these out-of-the-way radiators make it pos-

sible to install them *on the same installation* with conventional exposed radiators. They heat and operate in perfect balance with Weil-McLain Junior Radiators or other tubular radiators, because all are made of heat-holding cast iron, contain steam or hot water for storing heat, and possess the same general operating characteristics.

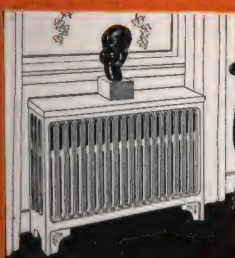
Investigate This Complete Line

When you select radiators for new home or replacement service, you will find a wide choice in the Weil-McLain line. Perhaps you will want "Concealed" Raydiant Radiators which are recessed in the wall—occupy no valuable floor space—interfere in no way with artistic furniture groupings. Or you may desire Partially Recessed Raydians, or Humidifying Raydians, or Weil-McLain Solray Radiators. No matter what type or types you specify, you will delight in the fact that their streamlined beauty harmonizes splendidly with modern architecture and interior decorative treatments. Should you require free-standing Weil-McLain Junior Radiators for the same installation, you will find they occupy 40% less space than old-style conventional radiators. Their slender, graceful lines blend beautifully with modern interior decoration . . . and, of course, these small "suns," too, supply sunlike radiant heat.

Radiant Comfort Heating with Weil-McLain Radiators is the safe, certain way to provide utmost comfort, regardless of weather conditions. It assures uniform warmth *without* chilly window zones or treacherous floor drafts. And because it keeps rooms always warm and comfortable by meeting cold where cold comes in, it guarantees highest efficiency and operating economy of your heating system. Before you decide upon the radiators to install, investigate the *complete* Weil-McLain line.



Solray Radiator



Cabinet-type Raydiant



"Concealed" Raydiant

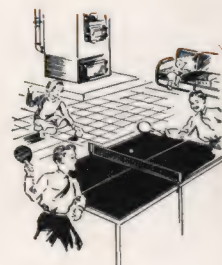
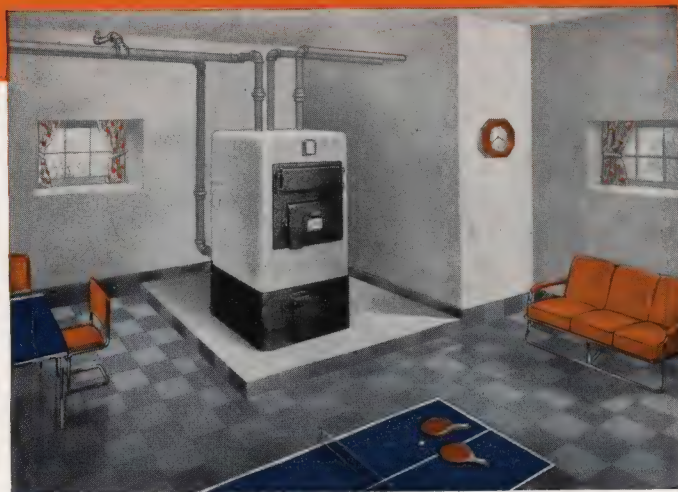


Humidifying Raydiant



Junior Radiators

For Greater Economy and Efficiency ... WEIL-McLAIN BOILERS



Scientifically Engineered to Fight Fuel Waste

● No matter how excellent may be the radiators, no home can be adequately and comfortably heated without an efficient modern boiler downstairs. Whatever kind of fuel is used—coal or coke for hand firing . . . oil, gas, or stoker for automatic firing—Weil-McLain Boilers effectively *fight fuel waste* and supply maximum heat requirements to radiators.

The real cost of any heating system is written in the fuel it consumes and the comfort it provides over a period of years. With more than 40 years' experience to guide them, Weil-McLain engineers have designed a complete, efficient line of waste-fighting boilers which embody *both* modern improvements and traditional Weil-McLain quality.

Necessary tapings and openings for automatic heat controls . . . thorough insulation . . . attractive appearance . . . and refinements in design and construction are but a few of the outstanding features you will find in Weil-McLain Boilers. They are provided with facilities for economically supplying domestic hot water in winter or the year-round.

There is a Weil-McLain *waste-fighting* boiler especially designed to meet your exact requirements. Before you select *any* boiler, investigate the high operating efficiency and low operating cost of Weil-McLain Boilers. Weil-McLain Co., 641 W. Lake St., Chicago, Ill. and 501 Fifth Ave., New York City. Factories at Erie, Pa. and Michigan City, Ind. Distributors in over 75 cities.

See Your Heating Contractor or Nearest Weil-McLain Distributor for Further Information



No. 67 All-fuel
Boiler



No. 77 All-fuel
Boiler



No. 78 Boiler for
Automatic Firing



"RO" Series Boiler for
Automatic Firing



Round-type
Boilers



Self-feed
Boilers

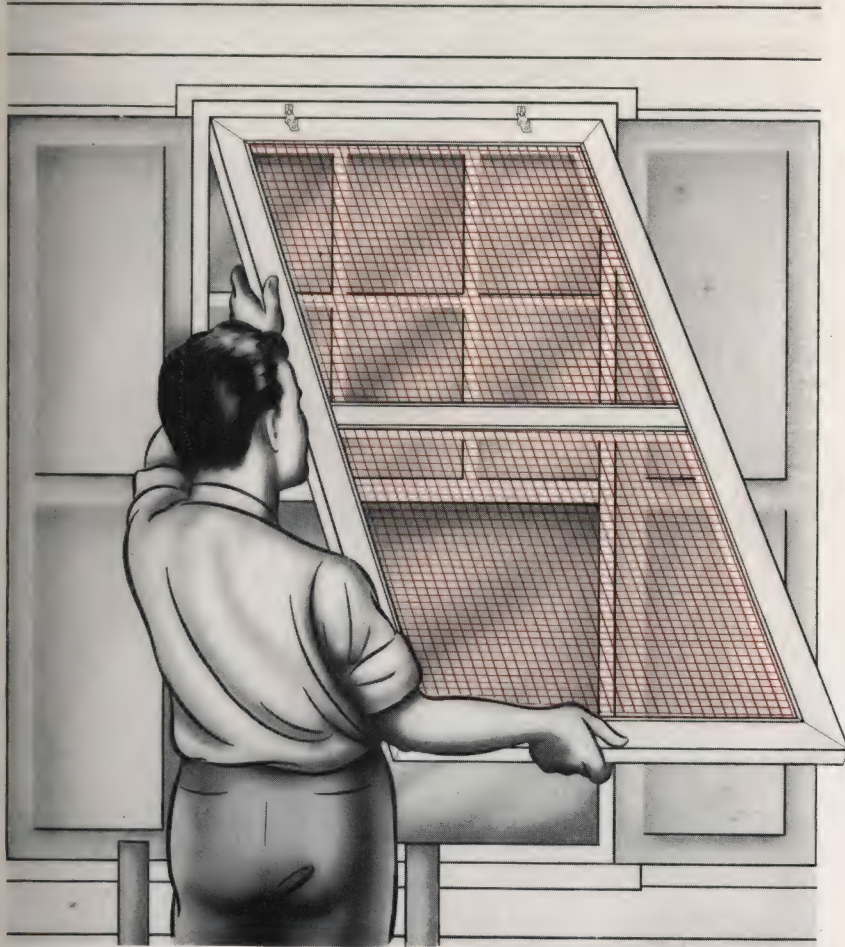


Square-type
Heavy-duty Boilers

WEIL-McLAIN *Radiant Comfort* HEATING

Be WINDOW WISE Buy

FULL SIZE SCREENS



What is a Full Size screen? . .

A full size screen is a screen that covers your entire window. It is a screen that will give you the necessary combination of full protection, full ventilation control, and full service.

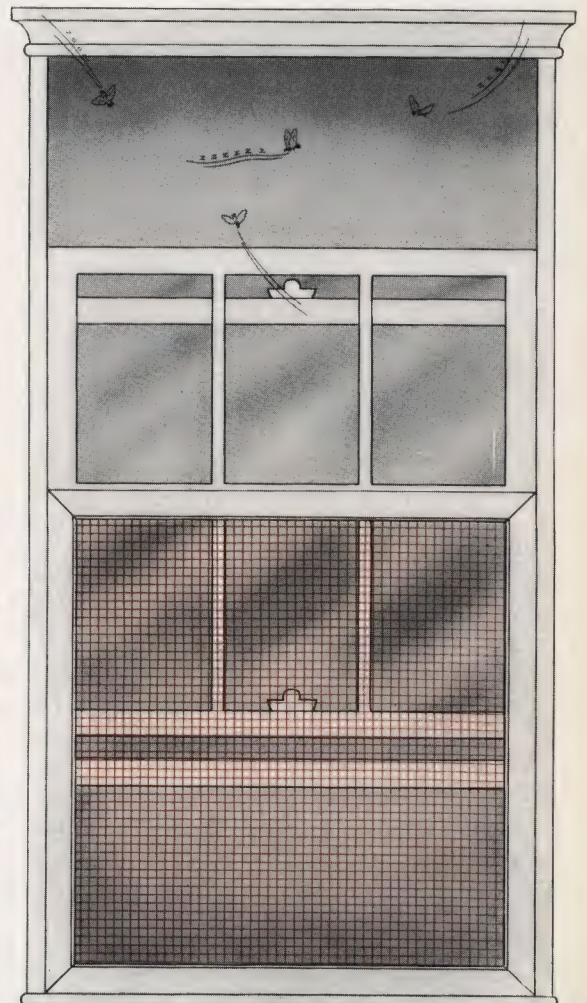
If your Screens are only **HALF SIZE**
you're only **HALF PROTECTED**

When you are building or installing window screens, be sure to install full window-size screens. It is the only way to get full protection from flies, mosquitoes, and other germ-bearing insects. With full-size screens, you can open the windows from both the top and bottom and get adequate ventilation. And too, full-size screen frames will last longer than half screens because they are stronger and securely attached to the window frame.

Selecting The Mesh . . . Before selecting the insect screen cloth for your screens, be sure to know what kind of bugs and insects are in your neighborhood. 16-mesh (16 openings to the inch) will keep out the average house-fly and malaria breeding mosquito. However, many sections have small mosquitoes and gnats that require 18-mesh.

Comparative Costs . . . Many people think that full window-size screens cost twice as much as half-size screens. This is not correct. For example, a full-size screen for a typical window such as 2 ft. 8 in. x 5 ft. 2 in. would only cost about 15% more than a half-size screen. For this 15%, you get full instead of half protection, and many more years of trouble-free service.

(See other side)



6 important reasons why you should use WINDOW-SIZE SCREENS



1. **Full Window-Size Screens Give You Complete Protection**—full-size screens assure you an insect-proof window. When half screens are used it is almost impossible to get a tight fit between window sash and screen.
2. **Full Window-Size Screens Give You Better Ventilation**—with full-size screens you can open the window from the top and bottom. The half-size screen restricts your ventilation because you can open the window only where the screen is.
3. **Full Window-Size Screens Are Easier To Put Up and Take Down**—full window-size screens are easier to install than half-size screens. When half-size screens are used, it is usually necessary to remove the screen hardware before installing the storm sash. Full-length screens are hung on the same hooks that you use for storm sash.
4. **Window-Washing is Easier When Full Window-Size Screens Are Used**—by unhooking and tilting out full-size screens, both window panes are readily accessible. There is no troublesome half screen to try and slide up and down.
5. **Full Window-Size Screen Frames Last Longer**—full window-size screen frames are much sturdier than frames used for half-size screens. In addition, there are no slide or spring slots to weaken the frame, and no metal parts to get out of order.
6. **Full Window-Size Screens Are More Economical**—when you install full window-size screens, there is nothing to get out of order or to be replaced. Therefore, they are actually more economical in the long run, than half-size screens.

For Illustrated Folder, Write To ↓



DECORATING & FURNISHING



INSTINCTIVE in each of us is the age-old urge to create a beautiful, tastefully furnished environment that is our very own . . . an environment in which we can live and entertain with pride and enjoyment.

Important in creating this environment are the character and quality of our furnishings and decorations. Just what qualities must they have to make it in truth, "home, the spot of earth supremely blest; a dearer, sweeter spot than all the rest?"

Primarily, the environment must have comfort, beauty and livability . . . the gracious air of refinement that marks it as the home of one accustomed to pleasant, wholesome living. The very fact that the house is small and that consequently its furnishings must be limited, makes it all the more important that they be selected wisely.

We know today that the furnishings of our home have a vital bearing on our attitude toward life . . . that they tell other people what we are . . . and accordingly that we must use our best taste and judgment in their selection.



You Start with a SCRAP BOOK

By Edna J. Honigblum,

Official Decorator of Demonstration Home Number One*

SO you're going to furnish a small home!

Felicitations and good luck! Whether you believe it or not there is more fun to be had in furnishing a little house on a limited budget than hiring a decorator to do you proud with unlimited funds. This is really a challenge to your own good taste and ingenuity.

The first step in this venture is formulating your philosophy of a home. What sort of atmosphere do you want to create? Is it to be a formal house throughout, or are you interested in creating a charming, informal atmosphere for your husband and friends? It's a wise bride who consults her husband on his taste in furniture and fabrics before sallying forth to buy.

Neither of you need be disappointed, and, moreover, you may both be pleased by a combination of styles. Since Modern has settled down in line and color and since Traditional furniture is executed in simple "modern" lines, a judicious choice of both will create a charming home.

EXPERT HELP IS FREE

There are any number of people who will be an invaluable aid to you in formulating your philosophy of decorating. They are the home furnishings writers on magazines and newspapers and the decorators and salespeople in department stores. Model rooms are set up in most big department stores. Be sure to see them! Study them carefully for much can be gained here which will be useful to you.

But where do I start? What are the first essentials to consider?

How can I be sure that what I buy is the right thing? These and other questions will undoubtedly plague you.

As step number one—find a quiet nook and arm yourself with pencil,



paper and tapemeasure. Make a rough plan of your house before you begin to shop. Then block in just those basic pieces of furniture which are necessary to start life in your new home. For example, your living room might include a large couch, two matching or blending upholstered chairs, one coffee table, two lamp tables, two end tables, one desk and one desk chair.

This does not include all those extra little things which will create the personality of the room such as pictures, bookcases and other little luxuries. These can come later and will be easier to select when you have the basic furniture placed in your house.

Measure everything! Know the exact size of each room. This will be an invaluable aid to the salesperson who



will wait on you. He can measure the furniture which you have under consideration so that you can make a scale drawing of it and then try it on your plan for proportion and placement.

Paste swatches of material, wall paper, etc., in a scrap book of ample size. Keep your colors firmly in mind and do not go haywire on any individual color which will not blend with the rest of the room. Give the most careful consideration to the exact color, fabric and material you finally select for rugs and drapes for these constitute



* Bloomingdale's, New York City, was selected to furnish the Number One Demonstration Home at the N. Y. World's Fair. Leading department stores will likewise be selected to furnish the replicas now being constructed in principal cities throughout the United States. Location, dates, etc., furnished on request.

a background for your furniture. Do not buy them until you have finally decided on your furniture. Although you may be mad about a deep brown broadloom, it will not enhance your room, if your furniture is all dark mahogany.

Gather samples of curtains, drapes, carpeting as you go along. Study them



by daylight, under artificial light, and keep them near you. In short, try living with the samples a few days before you decide that you want them for a lifetime.

GO WINDOW SHOPPING

Curb your impatience to get started on your buying until you are absolutely sure that you have made the best choice of each article. It is wise to study a few types of furniture first. Go window shopping! Putter around the department stores and visit their model rooms. Look at antique shop displays. Read good home furnishings magazines, always taking notes for your scrap-



book. Pay particular attention to that type of furniture and decor with which you feel most at home. After all, you are going to live with it.

Although Modern seems to be the natural choice for the contemporary home, 18th Century furniture should not be overlooked. Because of its simple lines and great charm and dignity, it has been accepted by people of good taste through the centuries. It has the happy faculty of blending with Modern pieces. Some Victorian furniture also gives a nice effect with Modern. Of course, the utmost discretion should be exercised when you start to blend various periods. Try clipping magazine photos of pieces of furniture that appeal to you. These go into the scrap-

book, too. This gives you a pretty good picture of how they might look assembled in your home. The finish and workmanship on reproductions of 18th Century furniture today are excellent and within the range of the average pocketbook.

Modern, the popular choice of young "moderns" today, is a basic style easily adapted to everyday living. It has settled down in price and variety and is now available in dark woods. Heretofore all modern woods were light. Today you need not confine yourself to birch, but can buy bleached walnut in a warm brown tone, dark walnut, and mahogany and a variety of other dark woods.

BE CAREFUL WITH COLOR

Now we come to color—and the caution here is to watch your step. Bright, vivid colors filled with life and vitality are a great temptation to the novice decorator. Beware of your fondness for some particular color. Your husband may adore you in magenta but that doesn't mean he wants to wake up every morning and see it on the wall. It is difficult for women, especially, to restrain themselves from purchasing a fabric right on the spot which appeals to them. To this end, carry your scrapbook all pasted up and blocked off into the needed furniture and space requirements, with your notes on color of furniture and the amount of light in each room.

If you do this, the luscious yellow wall paper that first catches your eye will fade in desirability when you note the bleached walnut chairs, for example, that will be placed in front of it.

USE "MUTED" COLORS

A helpful decorating hint advanced by an industrial designer, widely known for his "streamlined" furniture, is to choose soft, muted colors throughout the house. If this is done, he claims, you can move any piece of furniture from any room, right into another room and with excellent result. The walls, of course, must be painted in complementary colors. He has worked it out beautifully in practice by using subdued shades of greens, mauves, beige, cocoa, brown, plum, pink, blue and white. Color accent is achieved in accessories such as lamps, vases filled with flowers, and drapes with one sharp color accent. The result is a most restful and eminently livable house. It is the answer to the limited budget as nothing else could possibly be!

With the use of shades and tones that complement each other throughout the house, it is an easy matter to arrange living quarters so that they will do "double duty." The living room may easily serve as an all purpose room.

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specially designed for
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Full scale 88-note Wurlitzer Piano, 36 inches in height—easily fits into the smallest room—rich, resonant tone—5-year guarantee—an exclusive Wurlitzer finish

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—A variety of harmonizing colors to match your room furnishings—or, if you prefer, you may choose any finish you want, from hundreds of special patterns.

The Rudolph Wurlitzer Company
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Send folder describing this outstanding piano achievement.

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CARPETS—Base Of The Room Ensemble

IN planning our rooms we like to think of them as a whole, as ensembles—and nothing so well ties together all of the various elements in a room as wisely chosen rugs and carpets.

Carpets should be bought with care because they last for many years. Quality is therefore important, but color is important, too. In general it is wise to pick your carpet or rug in a darker color and let the lighter colors appear in wall coverings, curtains and decorative details.

PLAIN OR PATTERNED?

Be careful in your choice of patterns. Safest choice is a plain color carpet—let's say you pick a green. Your important pieces of furniture may then be upholstered in some version of green's complementary color, red; yellow on the walls might add a third harmonious element. And then in one or two important pieces of furniture you might want to combine all of the room's predominant colors.

If your choice runs to a patterned rug or carpet you will want to be sparing in your use elsewhere of the dominant

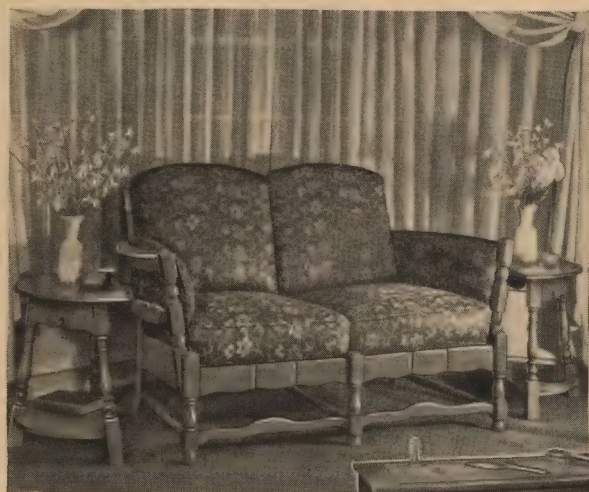


Dark colors on and near the floor, light colors above.

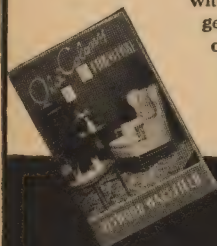
color. But it will appear here and there, as will the other colors in the pattern.

A good general rule to remember is

that large surfaces like your floors are best treated in neutral, subdued colors. Pick up your brilliant accents elsewhere in the room.



Now... completely new, 24-page book on *Old Colony Furniture*, filled with decorative suggestions. Send 10 cents (coin preferred) to Dept. R, Heywood-Wakefield Co., Gardner, Mass.



Charming and Livable!

HEYWOOD-WAKEFIELD *Old Colony Furniture* is charming, livable, and authentic in design. It follows the true American tradition of combining utility with beauty . . . of creating furniture which is *both* practical and decorative. That is why you will enjoy furnishing a single room or an entire home with *Old Colony* . . . why you will treasure it down through the years. Most of the better furniture and department stores everywhere can show you interesting groupings of HEYWOOD-WAKEFIELD *Old Colony Furniture* . . . and at surprisingly reasonable prices, too!

HEYWOOD-WAKEFIELD

GARDNER, MASSACHUSETTS

FINE FURNITURE SINCE 1826

Here's How One LIVING ROOM Was Planned

WHETHER your home is small or pretentious, the living room will be the center of family and social life. It is therefore the room which deserves the most effort toward creating the right effect. This is the room which will be constantly improved with little luxuries after the basic pieces of furniture have been put down.

After the last drape has been hung and your favorite flowers placed on

WALLS—Papered in soft green with a leaf design in ivory tones.

WOODWORK — Painted in same ivory tones as leaf design.

FLOOR—Broadloom rug of deep cedar shade on cork floors.

WINDOW TREATMENT — (Here there is plenty of light and spacious windows). Curtains of sheer white Ninon; drapes of soft muted green (darker than wallpaper).

dark brown of the rug. A good buy is a sofa-bed, for you will surely want to provide for the occasional "overflow" guest. This one has an arm coming down in the middle, which can be pushed back in the same manner as in automobile rear seat upholstery.

END TABLES—On either side of the sofa, dark walnut end tables make a handsome contrast with the deep plum of the upholstery. These support fairly tall lamps covered with lightish shades.

SECTIONAL SOFA—An innovation in the important "conversation corner," so necessary for the living room, is the sectional sofa which, when all in one piece, forms a chaise lounge—or separated, gives extra seating capacity for the room. This one is upholstered in beige wool, and fits snugly into corner.

Here is the living room in Demonstration Home Number One, in architect's perspective and in reality.



your pet table, this room will take on quality and personality. Whether you and your friends will find this quality endearing or not is wholly up to you.

Following out the idea of "double duty" rooms and remembering the desirability of soft, muted shades, which seem so practical for the limited budget, the following plan suggested itself for the living room of Demonstration Home Number One at the New York World's Fair. These notes may be used simply as a springboard for your own ideas. (This room faces south and west).



CHAIRS—Two chairs of a comfortable arm-chair type upholstered in beige were placed on either side of the fireplace, with a small table to form a hospitable grouping. One chair upholstered in the same soft muted green as drapery material with small table and lamp went against wall opposite windows.

COFFEE TABLE—A blond finish new type swivel coffee table stands between the arm chairs. This is a pleasant contrast, if as here the other woods are dark.

SOFA—Covered in a plum wool fabric, which accents the soft green and

MUSIC—As no home is complete without music, it is wise to save a section of the living room, as we did, for one of the new small pianos. A picture goes over the piano and flowers or candlesticks on top. The radio is important. We selected a portable one which can be carried around at will.

MIRROR—To give depth and height to our room, we used a large mirror around the fireplace, going from the floor to the ceiling.

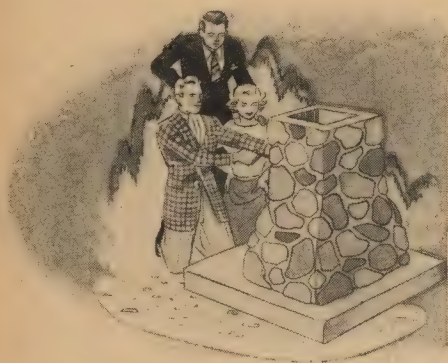
These filled the basic needs. Plants, pictures, occasional tables and chairs you will add in your own living room as you go along.



Barton-Dixie Corp.

Almost indispensable for the small home is the sofa that becomes a bed at night.

Live OUTDOORS and Like it!



AMERICANS like to live out of doors as much as possible in the summer. Designers and manufacturers have conspired to create the most alluring types of outdoor furniture to tempt you from the house into the garden or front yard. If you shop carefully and systematically you will be rewarded for your efforts in "finds" that for beauty and quality cannot be surpassed.

The typical small home has a nice expanse of green lawn. Much enjoyment can be derived from the purchase of wrought iron garden furniture, usually painted white and gayly upholstered. A round table, or a nest of glass topped tables placed conveniently near the chairs makes reading and lounging in the open very pleasant. If there is room, an old fashioned swing, or one of the new gliders is a fine addition to the group.

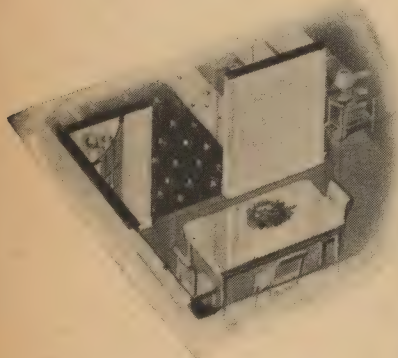


Tea is served on the flagstone porch of Demonstration Home Number One.

If you plan to eat in the garden it is wise to buy a sturdy orchard-type table, either in natural colored wood or white, something that can easily be cleaned and which will hold all you wish to load on it. The clever hostess makes only one trip from kitchen to outdoor table in the summer, bearing a large salad bowl, rolls and bread, cold drinks and cuts of meat. That is the "outdoor eating" answer for a happy husband and contented guests.

Most fun of all, particularly in the

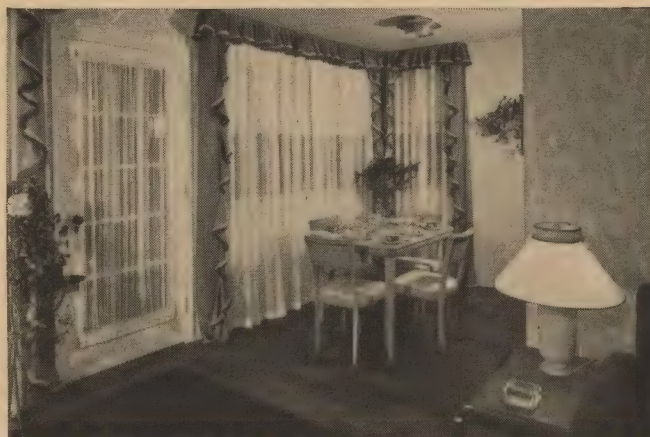
spring and autumn evenings, is to have an outdoor fireplace. It should be built in the garden area and a hedge of suitable height will give plenty of privacy. The fireplace may be made simply of stone or brick with a removable charcoal grill on top, or, if you want to do the thing elaborately, you can build an actual fireplace with chimney on top and with a brick or flagstone floor to make this unit a true outdoor dining room, just as your porch can be your summertime living room.



The Dining Alcove is seen above in architect's drawing, at right as viewed from the Living Room

ONE of the most satisfactory arrangements in a small home is to have the dining alcove directly adjoining the living room, forming an ell. This is a perfectly natural and informal arrangement. One meets his guests and entertains them in the living room and the general air of conviviality is not dissipated by moving

Glorifying the DINING ALCOVE



the party into a formal dining room.

Dinette chairs should be so designed that they blend into the color scheme

of the living room and can be brought into the living room when extra chairs are needed. Bleached walnut table and chairs are popular and reasonably priced.

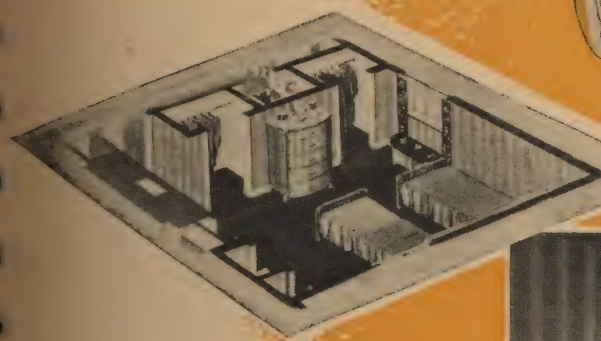
The table should provide comfortable seating for eight. A corner cabinet is a necessary adjunct; and china can add a touch of color.

Many clever hostesses add glass shelves or wall brackets to the wall for pots of flowers or bits of colored glass ornaments. A cork or linoleum floor can be easily cleaned.

The same drapery treatment should be used in the dining alcove as in the living room, if it is to be an adjoining room... sheer white Ninon curtains and soft, muted green drapes. The wallpaper, different from living room, picks up both tones of the curtain and drape.

MASTER BEDROOM

—and Home MANAGEMENT CENTER



The Convenience Wall is at left in this architect's view of the Master Bedroom.

If any room in the small house should do double duty, it is surely the master bedroom. Here the woman of the house deserves a spot all her own, in which to manage the household affairs of bills and budgets, in which to sew and sometimes—in this her very own sitting room—to relax.

All this is achieved in Demonstration Home Number One by the radically new "Convenience Wall" indicated in the plan view above.

But first a word about the furnishings! Our master bedroom is made restful and gay with the use of dusty pink bed spreads, on beds of light wood.

In order to save wear and tear on bedspreads, many clever brides are buying the modern cedar chest which can be placed at the foot of the bed or beds. This can be upholstered in the same material as the drapes. It provides a perfect place to sit while putting on your shoes and a perfect place for storing shoes.

Window drapes of smoky blue ground with dusty pink all-over flowers provide an excellent contrast to the bedspread. With this combination wall paper of light blue with grey stripes give additional light and color.

ALL CAN BE HOMEMADE

All of the curtains, drapes and bedspreads in this Number One house can be easily made at home.

Now for the really noteworthy Convenience Wall, which provides an ultra-modern sewing center and domestic office, giving maximum amount of service in a minimum amount of space.

This cabinet is approximately eight feet long and 21 inches deep, containing three sections. One has eight



The striped wallpaper is light blue and grey, the bedspread a dusty pink and the rug a deep blue.



Double plate glass mirrors built into the Convenience Wall provide glamour and luxury in the small home, and are very useful when fitting dresses.

drawers of varying sizes to take care of thread, sewing machine attachments, bias tape, patterns, materials, etc.

In another section a cutting table is provided to take care of laying out the patterns and cutting the material. This folds back into the center part of the cabinet and is completely concealed when not in use by the small doors just over the desk.

A COMPLETE SEWING ROOM

A small ironing board and dress form in the adjoining third section can be easily taken out and replaced as needed. Adequate space is provided for a portable sewing machine. For fitting, double mirrors are provided in the two doors. These doors may be opened in such a manner that by standing between them, both the front and back may be clearly seen. These mirrors will be welcomed at other times, too, as when the family is preparing to go out for an evening.

So often the woman is forced to lay out her pattern and cut her material either on a bed or dining-room table, to remove the knickknacks from the top of the sewing machine and to have the dress form brought down from the attic, and go elsewhere in the house to use a pressing board, in order to have

Old Furniture— New House? Call on Singer!



If you shudder at the thought of moving your old chairs and sofa into your brand-new house—make them over with new slip-covers! It's easy. Singer will show you how to get started on them—free.



Free help in fitting slip-covers, planning curtains, making rugs is offered at your nearest Singer Sewing Center. Look in your directory and phone for an appointment. There's no charge or obligation. Everybody's doing it—and it's fun!

See Singer's
Model Sewing Room
on page 73
of this issue

FREE BOOKLET with illustrated plans for building this sewing unit into your home will be sent on request. Address:

SINGER SEWING MACHINE COMPANY
Dept. 733, 149 Broadway, New York, N. Y.

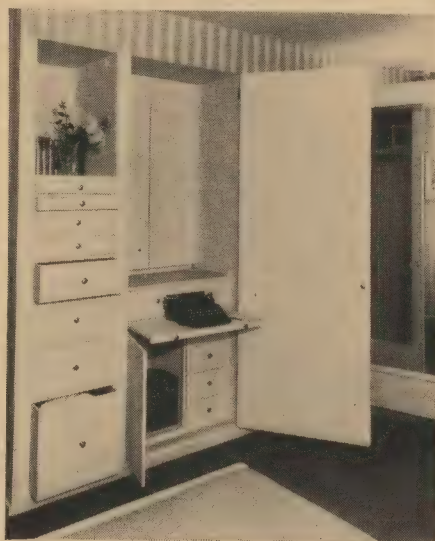
Singer



Hidden in the built-in cabinets is not only an ironing board but also a table for laying out dress patterns and other uses.

available the conveniences which aid so much in making sewing the real pleasure that it should be. Such difficulties she will not encounter here.

In short, this Convenience Wall con-



A typewriter shelf and ample drawer space are central features of this home management center.

tains all of the requirements of an ideal sewing room.

Other features of the Convenience Wall make it a complete home management center. There is a built-in desk which provides space for a portable typewriter, drawer space for bills, correspondence, etc., book shelves for cook

books and her own pet books not to be found in the husband's library, and a telephone conveniently placed for doing her daily marketing.

When the wall is closed the large mirror gives a feeling of spaciousness in the room. It is convenient, too, for the housewife to take a full length peek at herself, which according to psychologists is desirable; it encourages care regarding her appearance... an important consideration for the modern woman.

The cabinet in the desk—speaking of sewing again—is sufficiently large to provide space not only for the typewriter but also a portable sewing

machine. It is a handy storage space for the woman who, in addition to her cabinet machine, owns a portable machine which she takes away with her in the summer, or perhaps carries to her friend's house, if they plan an afternoon of sewing together. If the hostess plans an afternoon of sewing in her own home, this portable sewing machine may be set up on a small table so that both hostess and guest can be sewing at the same time.

A light is built into the recessed cabinet so that she will have plenty of light in which to work as efficiently on her household duties as her husband works in his office.

This type of built-in convenience will be thoroughly understood by the average cabinet-maker in your community. He is easy to find—just ask your local lumber and building material dealer, or your contractor, who will be able to put you in touch with the right man. You will find that your cabinet-maker (who, of course, is a fine carpenter) will have many other suggestions as to built-in conveniences.

Many of these unusual built-in features, such as ironing-boards, broom closets and even door-beds (which are hidden in a closet by day—but make an emergency guest room by night) can be seen in the show-rooms of your local building material dealer. They are manufactured by nationally known organizations, and kept in stock in your community—ready to be fitted into the plans of your home and decorated to suit the interior scheme.

A Room Designed for BABY

THE multiple function idea developed in Demonstration Home Number One carries through in the child's room. Here, under conditions that are ideal both psychologically and physically, the youngster can sleep, eat, and play.

Here is the room in which the most loving care in the world will be exercised in choosing just the right furniture and colors. It is the most important room in the house to husband and wife and nothing will seem too good. However, here, as well as elsewhere in the small home, you must think twice before you buy baby's furniture, from the standpoint of both practicality and comfort.

Your child's early environment helps to establish personality and character patterns for later life. Therefore choose furniture that is in harmony with a child's happy, carefree ways. It will have character building influence, in-

ducing him to wait on himself and care for his own things, which tends to build confidence and initiative in the child.

It is wise to buy a full size juvenile bed. This has railings on the side which guard against injury to the child. As he grows older the rails can be taken down and the bed can be used right

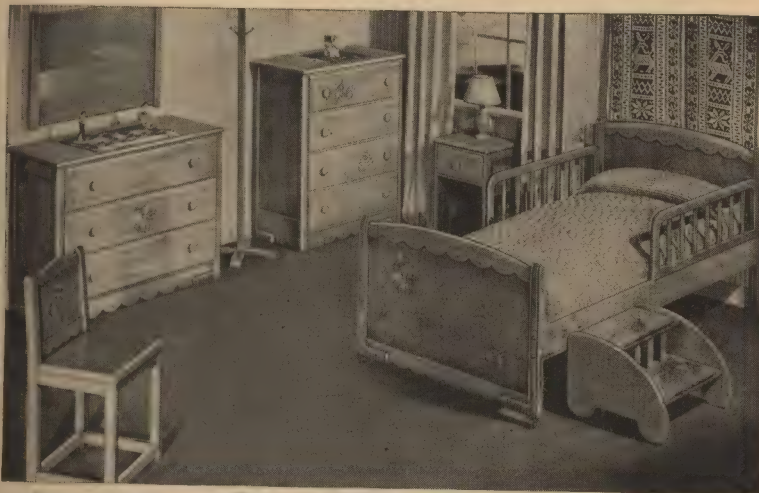
through adolescence. This is a good purchase after the child has outgrown the crib stage. Gayly painted figures on the furniture are excellent, but one must be sure that the paint is non-poisonous.

Maple furniture, dark and durable, should be considered a more practical choice than white furniture. Plenty of shelf space for toys and books should be built into the walls. Window seats are also excellent for storing.

Pastel shades for walls and accessories and gay star sprinkled linoleum for floor covering will suit both baby and you best.



El Rancherito ensemble as featured in the Number One Home at the New York World's Fair.



A CHILD'S response to environment is recognized as a powerful factor in its formative years. Training of the child to be self-reliant is made easier when aided by Lullabye furniture. Responsibility for the care of its own things is readily learned. An appreciation for finer things is rapidly developed. The child's room is no longer "just a room" but a haven of joyous childhood never to be forgotten.

It's



Lullabye juvenile furniture is fine furniture in every sense of the word. It is built from select Northern hardwood found only in furniture of the highest quality. Chest and chifforobes are dust-proofed, cribs have the practical and safe hand dropside, an exclusive Lullabye feature. See Lullabye at your dealer's. You will quickly recognize the quality which has made Lullabye the Number 1 choice of discriminating people.

Time

Lullabye has an interesting booklet, *It's Lullabye Time*, showing a wide selection of ensembles for children's rooms. To obtain your copy, write Dept. S., Lullabye Furniture Corporation, Stevens Point, Wisconsin.



★ FINE FURNITURE FOR CHILDREN SINCE 1897

GLASS adds Beauty EVERYWHERE

At top: Legs and top of the dining room table are of heavy plate glass, as is the fire screen. The dressing table is set into a mirrored recess.



Below: A novelty is the built-in, full-length mirror in the bathtub recess. For the vanity table, a small mirror on a movable pedestal is a useful accessory. In the living room a corner window area is composed of glass blocks.



Photos at upper left and lower right from Pittsburgh Plate Glass Company, the others from Libbey-Owens-Ford Glass Company.

IT'S *Mirrors* THAT MAKE IT MODERN . . .



THEY'RE INEXPENSIVE, AND THEY ENLARGE AND BRIGHTEN EVEN THE SMALLEST HOMES

● In your new home, you'll find that mirrors will do much to make it more livable. Mirrors add utility and beauty all in one...make small rooms loom large, and do it with a decorative touch that is hardly attainable by any other means. The cost, for even the finest quality, is surprisingly small.

In your bedroom, a full-length mirror on the closet door is almost as important as ample closet space—be sure you have both. And be sure, too, that your mirrors are made of L·O·F Polished Plate Glass—recognized everywhere for its unusual brilliance and freedom from imperfections.

If you need any help or suggestions, your local L·O·F Distributor will be glad to cooperate. You'll probably find him listed in the yellow pages of your local phone book under "Glass." Libbey-Owens-Ford Glass Company, Toledo, Ohio.



LIBBEY · OWENS · FORD
QUALITY GLASS



After Sundown *Good Lighting* Brings Added Charm

LIGHT in the home plays a triple part. It helps you to see, thus guarding you from accidents and prolonging your days into pleasant evenings. Its decorative value is great, so that it has importance in the design of each room. It lends charm to whatever it illuminates, so that it has a role to play in the architectural scheme of your home.

It must be the right kind of light, however, if it is to accomplish these three functions. There must be *enough* light, and it must be of the right *quality* or it will fail of its purpose. Good lighting in the home is always without glare—no exposed lamp bulbs and no sharp contrasting shadows.

Engineers have developed lamps and lighting fixtures of high illuminating

efficiency. Architects, designers and decorators have recognized the beauty of light and know how to use it to develop the full charm of the object it illuminates. Your local lighting company employs lighting specialists who know how to apply all these principles and are always glad to help. The rest is up to you.

Below are shown some striking examples of lighting for each of these three purposes. Most of them illustrate more than one purpose. Several of them come from the "Homes of Tomorrow" at the New York World's Fair, and represent the best in modern lighting practice. When you glance at the pictures you will think of many other applications of these three principles that are suited to your own home and your own individual lighting problems.

← LIGHTING FOR EFFICIENCY

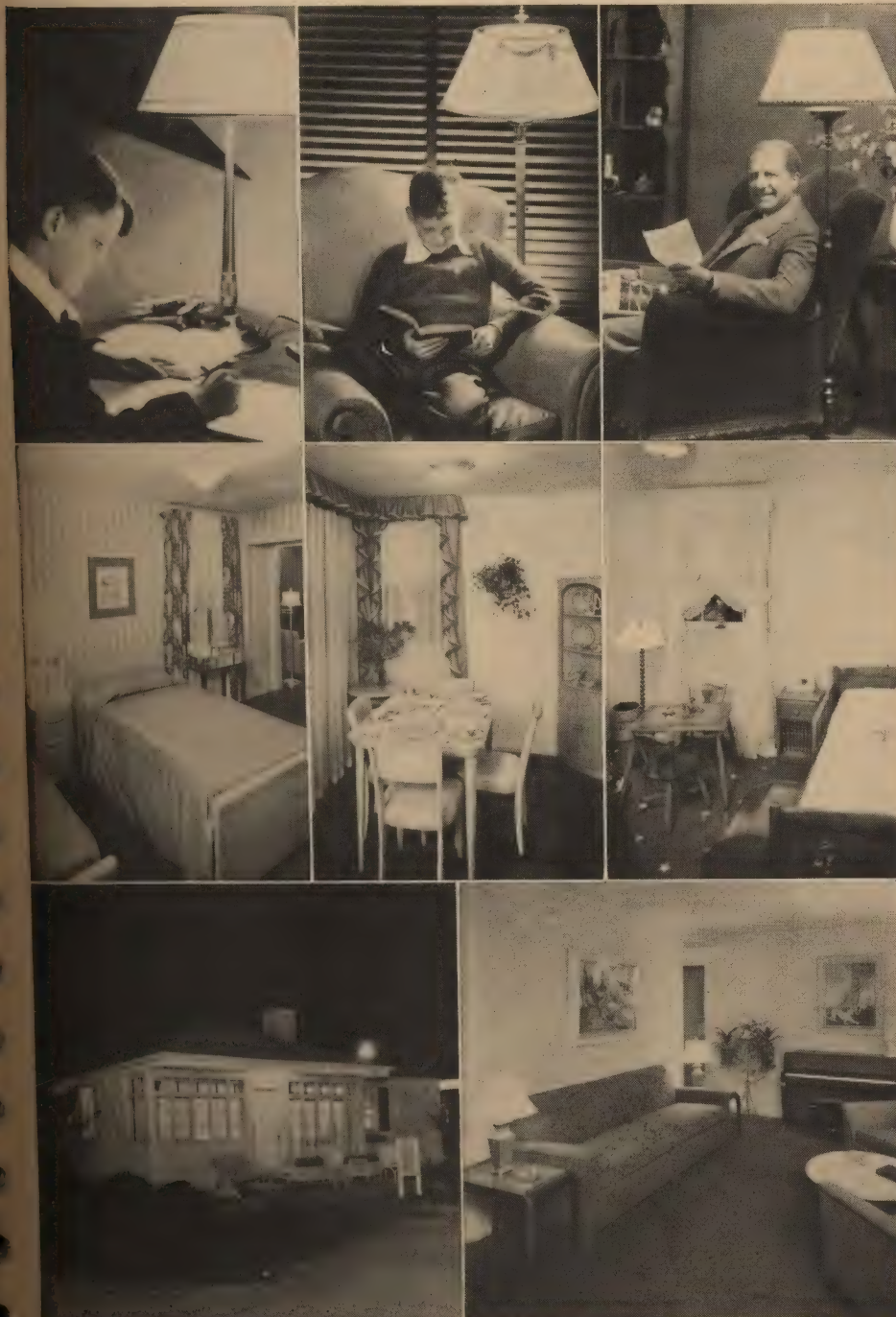
For efficiency, the modern I.E.S. study lamps and floor lamps are ideal for their purposes. They provide adequate light for reading and study, shade it carefully to protect the eyes from glare and diffuse it sufficiently to give good general illumination in the immediate vicinity. "You can't go wrong" with an I.E.S. lamp for such purposes.

← LIGHTING FOR BEAUTY

Here are three splendid examples of "lighting for beauty" from the "Homes of Tomorrow" at the New York World's Fair. Whether it be the master bedroom, dining room or nursery, good lighting is equally important. And if the lighting is also a thing of beauty, as in these three instances, so much the better. This lighting goes even further. It lends charm to the furniture, draperies, dining table—the very rooms themselves!

← LIGHTING FOR CHARM

Lighting certainly adds charm both to interiors and to exteriors. Two more interesting World's Fair examples which show how lighting may bring out the charm of architectural features, of pictures and furniture, of decorative effects. Of course these examples of lighting demonstrate, too, the high efficiency and modern beauty of present-day lighting equipment. There are ideas here which you can use profitably in your own home.



KEEP COOL PLEASANTAIRE ROOM COOLER

offers you relief from heat and humidity at low cost. Spring weather all summer long in Pleasantaire Conditioned rooms. Do you remember how much pep and energy you have in Spring? With Pleasantaire you have them all summer long.

COST IS LOW

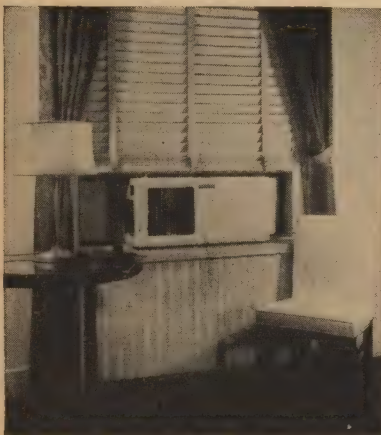
The lowest priced room cooler on the market. Only a few cents a day to operate—less than half a kilowatt of electricity an hour. A cool room pays big dividends in increased energy and efficiency.

IT COOLS

Its powerful refrigeration plant absorbs excess heat, transfers it outdoors.

IT DEHUMIDIFIES

Surplus moisture is removed from the air. Pleasantaire removes not only the heat, but the humidity.



Pleasantaire in the bedroom window means quiet, restful sleep all summer long

IT FILTERS AND VENTILATES

Outdoor air brought in is filtered, dust and pollens removed. Room air is washed by passing through a wet coil, dust and pollens already present are carried away with the surplus moisture.

IT CIRCULATES QUIETLY

Gentle, draftless circulation of dehumidified air promotes evaporation of moisture from skin surfaces. It is quiet in operation.

IT KEEPS OUT INSECTS

No flies or mosquitoes bother the occupants of Pleasantaire conditioned rooms. The snug window installation and air filters provide complete protection from even the smallest insects.

IT SHUTS OUT NOISE

Closed doors and windows mean quiet work or sleep. Pleasantaire owners don't have to listen to street noises or to a neighbor's noisy radio.

RELIEVES HAY FEVER

Hay fever victims are assured of relief through use of Pleasantaire.

**PLEASANTAIRE
CORPORATION**

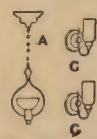
1623 CONNECTICUT AVENUE
WASHINGTON, D. C.

Check This Analysis of LIGHTING NEEDS

THERE follow brief descriptions of the minimum number and kinds of lamps for the different rooms in your home. With them are sketches of types of fixtures approved by Illuminating Engineering Society (I.E.S.). This organization of lighting experts, during the past few years, has made many improvements in fixtures to produce maximum diffusion of light by scientifically designed shades and reflectors which minimize the glare that is so hard on the human eye.

In selecting your fixtures be guided by these minimum standards of which there are, of course, many variations to suit any kind of decorative scheme.

HALLS. For entrance hall a Ceiling Fixture (A) is preferred—with a 60-watt bulb. Wall Brackets (G) are optional if architectural arrangement does not allow for a Ceiling Unit. In all other halls either a Ceiling Fixture or Wall Bracket is optional. Use 60-watt bulbs.



No. 1 Home in World's Fair "TOWN OF TOMORROW," light conditioned with

FIXTURES BY VIRDEN

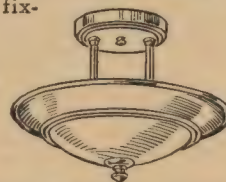
• To provide the utmost in beauty, utility, and livability, at lowest possible cost, was the inspiration for the World's Fair Model Homes, so it is not surprising that the No. 1 Home is completely equipped inside and out with lighting fixtures by Virden.

Authentic as to design, scientifically correct as to lighting and built to endure, there is no surer way to get full value from your lighting dollar than to select fixtures by Virden.

Ask us to tell you where you can see a display of fixtures by Virden.



Bedroom Unit in Ivory and Gold. A decorative and efficient fixture of the semi-indirect type. Two lights; spread 12"; capacity 100-W.



Ceiling Unit in Ivory and Gold. The cheerful, restful semi-indirect light is enriched by a soft mellow glow from the new Mellowtone glass. Depth over all 11½"; spread 12½"; capacity, 150-W.



JOHN C. VIRDEN CO.
CLEVELAND, OHIO



LIVING ROOM. The most used room in your home demands good lighting, particularly for close visual tasks. It requires a 200-watt Ceiling Fixture (A); at least 3 I.E.S.* Better Sight Lamps:—1 Floor type (E), of from 100 to 300-watt capacity; 1 End-Table type (F)—100 watts; 1 Study type (D)—100 watts.



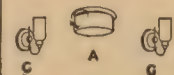
DINING ROOM. Here the table, as the most important part of the room, should have a semi-indirect type 150-watt Ceiling Fixture (B) directing good downward light well diffused on the table but out of the eyes of the diners. Decorative lights such as 25-watt Wall Brackets (G) may be added, but do not depend on decorative lighting to properly light this room.



KITCHEN. This, the workshop of the home, must have good glareless, shadowless lighting. It requires a Ceiling Fixture—semi-indirect or enclosing globe type—such as (A) with a 150-watt bulb. At work centers such as the range and sink there should be Wall Brackets (L) well shaded—with 60-watt bulbs in each.



BATHROOM. Here, the proper lighting of the mirror is most important. A Wall Bracket on each side is desirable—preferably luminaire lamps or diffusing glass cylindrical type (K)—60 watts each. If the bathroom is large—over 8x8 feet—a 100-watt Ceiling Fixture (A) should be added.



BASEMENT OR RECREATION: Of greatest importance here is a well-lighted stairway. The room should have a 100-watt Ceiling Fixture (A) if the height permits and 1 or more Wall Brackets (G) with 40-watt bulbs. Otherwise, Bracket Units to light all parts of the room—60 watts each.

BEDROOMS. Require good general illumination from a 150-watt Ceiling Fixture—semi-indirect type (B). A pair of Vanity Lamps (I) about 18 inches in height are a necessity on the dressing table—75 watts each. For twin beds an I.E.S.*



100-watt Table Lamp (F) or Wall Lamps (H) over each bed—75 watts each. For double beds, at least one—preferably two, I.E.S.* 100-watt Reading Lamps (D).

*Illuminating Engineering Society

Now— the Dual Purpose GARAGE

BACK in the early days of automobil-
ing, a garage was little more, in addi-
tion to a place for car storage, than a
kind of catch-all for tools, garden im-
plements and the like. Now comes the
modern dual purpose garage, which ac-
tually adds an important room to your
home.

In addition to being a roof over your
motor's head at night, it is nowadays a
play-room, a hobby room, a workshop,
and a "rumpus room" where all kinds
of parties and games can be played.

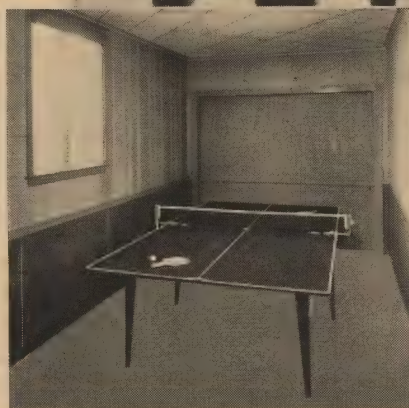
USE THAT EXTRA SPACE

People with mansions don't have to
worry much about this business of
room; but for everybody who has a
small home—that is for most home
owners in America—the extra square
footage of the garage can accommodate
some of the most absorbing and delight-
ful activities of the modern family.
This is true whether the garage is at-
tached to the house or separate from it;
whether it is for one car or for two.

The question of whether or not the
garage should be attached to the house
is usually decided for you by local or
state building codes. Some prohibit
attached garages; other require special
and expensive fireproof construction, if
the building is attached to the house.
But under any circumstances, you can
make the garage useful for any num-
ber of pleasant activities, with a little
thought and just a little extra expense.

A workbench can be installed at the
rear of the room and even if there is
room for no more than a foot-wide
bench, it is surprising how much work
can be done on it. Tool racks under-
neath, a hand or a power lathe fastened
to the shelf of the bench itself, and saws
of other special tools hung on the wall
over the bench—and a compact little
corner for woodworking, metal work-
ing and other hobbies is created.

One of those easy-to-handle table
tennis tables can be securely stowed
away along one wall of the garage.
Drive the car out, set up the table, and
you have an exciting, active game in
which every member of the family big
enough to handle the paddle can join.
And you can store extra bridge tables
and bridge chairs along the same wall,
too; and shelves can be built in above

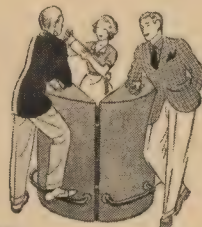


*Like the other rooms in Home Number One at the
New York World's Fair, the garage has many func-
tions. At left: the car has been rolled out to permit
a game of table tennis. Above: View shows the
garage "L."*

PLAY CARDS



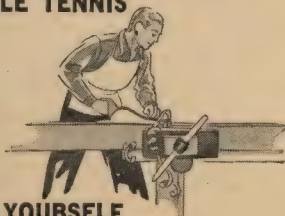
HAVE A DRINK



PLAY TABLE TENNIS



MAKE IT YOURSELF



EXERCISE



on which any number of games can be
kept.

When you want to have a really siz-
able bridge party in your house, just
drive the car out, set up the tables, and
let the bids fall where they may. When
such a party is under way, the work
bench can be disguised with oil cloth or
paper napkins, and with a turn of the
wrist it becomes a buffet or a bar.

KEEP FLOOR CLEAN

Always be sure that a large flat pan
is kept under the car when it is in the
garage, so that any oil dripping from
the motor can be caught in it and be
kept from marring the floor. If just a
little care is taken thus to keep the floor
clean, it can be used as a dance floor.

You will want your garage walls to
be more than bare brick or lumber if
you are going to use it for such festive
occasions. At little extra expense the
walls can be finished in variegated
shades of wood-fibre paneling. This
type of wall surfacing requires no
painting, and any dirt marks on it can
be wiped off with a damp cloth. It is
sound-absorbing, too.

Garage doors, whether of the hinged
type, or the side-rolling or the over-
head variety, now come sufficiently
well made so that they offer some pro-
tection against outside cold. An ade-
quate radiator placed in the room will,
with the doors closed, heat it to com-
fortable warmth.



*Shows Cloth-Like
Beauty of Lintone
Texture Found
Only in*

15¢ CLOPAY Lintones

★ Gone, now, is that blotchy, papery look of fibre window shades. For CLOPAY has perfected the "Lintone" process that makes fibre shade material look like linen. This enables you to have lovely window shades at a fraction of usual cost . . . only 15¢ each, 36" by 6' size, ready to attach to rollers. (On new rollers, 25¢.) CLOPAY Lintones have no clay-filling; they don't pinhole, crack or fray. They hang straight, roll evenly. Wear for years. See the new CLOPAY Lintones now before you fill spring window shade needs. A wide variety of colors and patterns now at 5¢ & 10¢ and neighborhood stores. For color samples, send 3¢ stamp to CLOPAY CORP., 1318 Clopay Square, Cincinnati, O.

Also..

CLOPAY Washable WINDOW SHADES

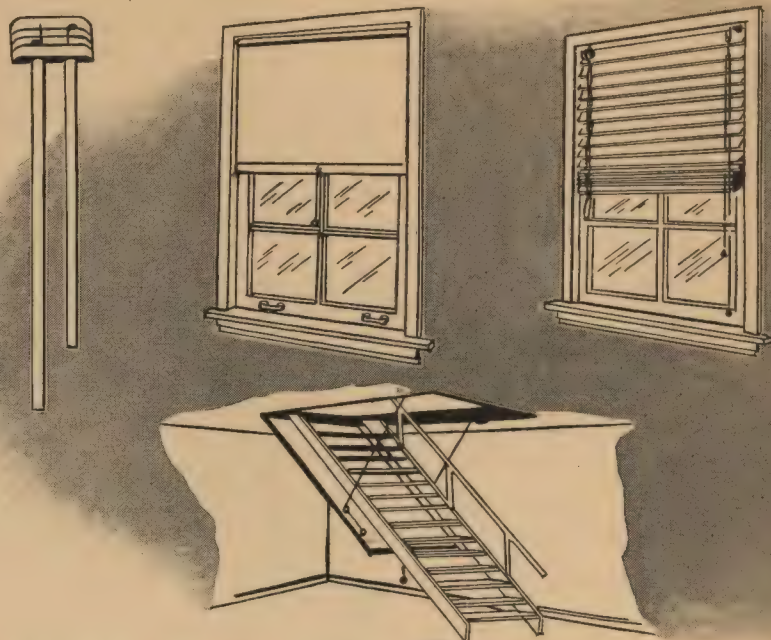
★ Cloth-like Lintone beauty PLUS 100% washability. Oil-paint finish on both sides. Lintone shade material washes clean of soot, grime, finger-marks without streaks or rings. CLOPAY WASHABLES in many colors; sizes up to 54" x 7' at 5¢ & 10¢ and neighborhood stores. Send 3¢ stamp for color samples.

35¢ COMPLETE ON ROLLER



CLOPAY WINDOW SHADES

And Now for Some



Above, at left, are the electric door chimes that supplant the harsh toned buzzer. Then come window shades: first a washable fabric shade and beside it a handsome Florentine blind. Below is a suggested means of access to the attic—an easy upward shove and the stairway disappears.

ONE of the fascinations of home ownership is the opportunity it gives to add through the years new comforts and conveniences.

The electric door chimes illustrated above are typical of the "finishing touches" that will be added as the budget permits.

The subject of closets is one that merits the study of the home owner. For the newly married couple, the problem is usually unimportant, but as the time passes and possessions accumulate, the question of "Where to put it?" is constantly before the house.

Where closets are inadequate, remember that more than 40 different fixtures are available today to accommodate every major article of clothing and practically double the available hanging space.

Here are some things to remember about closets, if your house is still in the dream stage and you are discussing the matter with your architect or builder. Will there be adequate space for winter outdoor clothes in a closet adjoining the front entrance? Will there be a bathroom closet with plenty of space for towels? A commodious linen closet is a boon to the careful housewife, and in the master bedroom there is much to be said for two closets—one for the man of the house, and one for the woman. As in Demonstration Home Number One there should be a conveniently located closet for the vacuum sweeper and all other cleaning equipment.

The items illustrated above serve merely to indicate the wide range of conveniences available for every room.



BUY THE DOOR CHIMES HOME EXPERTS SELECT

The fact that nationally known building experts and interior decorators have selected Rittenhouse Chimes for exclusive installation in the nationally known model homes listed below, is more convincing than anything we could say.

Number One Demonstration House in the "Town of Tomorrow," at the N. Y. World's Fair. "Homewood . . . the All-Gas-Good Housekeeping House" at the N. Y. World's Fair. P.E.D.A.C. "House of Homes," Rockefeller Center, N. Y. House Beautiful's "Bride's House," N. Y. Rittenhouse Chimes were selected for unexcelled quality of tone, styling, workmanship. Various models and finishes . . . \$1.00 to \$50.00. Your electrical dealer, department or hardware store has them or can get them quickly.

* Send post card for free folder.
THE A. E. RITTENHOUSE CO., INC.
Dept. 299 Honeoye Falls, N. Y.

RITTENHOUSE ELECTRIC DOOR CHIMES

Finishing Touches



Architectural Forum and
Knappe & Vogt



Above is a phantom view showing a few of the many fixtures specially designed for maximum use of closet space. Next comes a decorative nook for the telephone, and at the right one of the small portable room coolers that rob hot summer days of discomfort.

K-VENIENCES

Double CLOSET CAPACITY

Make
Tidiness
Automatic

These cleverly designed fixtures will give you that extra closet space you desire—insure orderliness—keep garments in better condition and quickly accessible. There are Shoe Racks, Hat Holders, Tie Racks, Trouser and Skirt Hangers, Garment Carriers, Towel Bars, and many others—more than 40 practical, space-saving fixtures to choose from—inexpensive, easily and quickly attached. Recommended by leading architects and builders.

Sold by leading lumber dealers, department and hardware stores, or write direct.

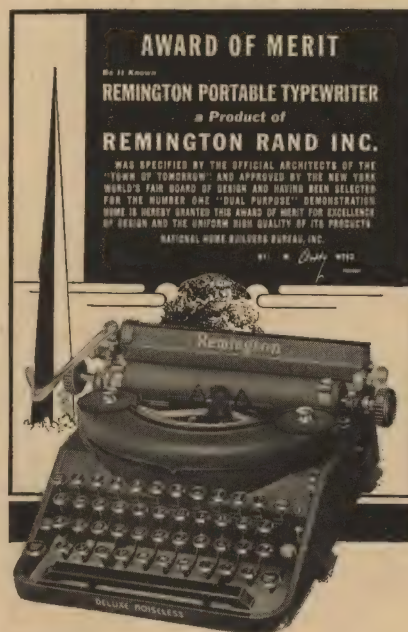
FREE CATALOG Shows How to Double Closet Capacity—Write Today!

KNAPE & VOGT MFG. CO.

Dept. S-1

Grand Rapids, Michigan

CHOSEN FOR THE "HOME OF TOMORROW"



REMINGTON THE TYPEWRITER OF TODAY

A bedroom becomes an office—efficiency succeeds inefficiency—convenience succeeds inconvenience and the Remington Noiseless Portable, the modern writing instrument, succeeds the pen.

REMINGTON RAND INC.
BUFFALO, NEW YORK

the smart new cleaner
for the
smart young home-makers

HOOVER "305"



ONLY \$1.00 A WEEK

Payable Monthly

You might as well have the finest make of cleaner—when you can own it that easily! This big-value, low-priced Hoover is ultra-modern in design and features—and years ahead in cleaning. Keeps the clean new color in your home fresh and bright, by Color-Cleaning with the patented Hoover Agitator and the famous Hoover Cleaning Tools. Your Hoover dealer will show you the new "305"—and the Hoover Cleaning Ensembles which switch instantly from rug to furniture cleaning, while motor is running. The Hoover Company. Factories: North Canton, Ohio; Hamilton, Ont.

Free Color-Cleaning of one rug and one piece of furniture. Ask your Hoover dealer for this service.



It Beats ... as it Sweeps ... as it Cleans

Put Old Mother Nature to Work

THE sun and the wind and the rain that beat upon your house—the good earth around it—here right in your hands are the ingredients of beauty.

Landscaping is an art; yes! But observe the following fundamentals and you will learn that landscaping the grounds of your home is, among other satisfactions, the world's best fun.

Trees, shrubs, flowers, grasses—you will be working with living things, sensitive to abuse, yet abundantly responsive to intelligent care. And Old Mother Nature for all her caprices will be your staunch ally.

The expense of beautifying the small house lot need not be much, it averages from five to 10 per cent of the cost of the house. Entering into this cost are the landscape plan, if professional help is used, grading topsoil and fertilizers, plant materials and lawn grass seed and their installation.

The above mentioned landscape PLAN is important because it frequently shows the desirability of changes in the house plan—or perhaps a few degrees difference in orientation, to gain the most from a fine tree or a lovely view.

THREE DISTINCT AREAS

If you do your own planning, remember that your home grounds consist of three parts—front area, service area, and garden area.

The front area under today's traffic conditions, is no longer a living area; think of it only as a setting for the house, unadorned except for a few shade trees and foundation planting, if necessary.

The service area, which should be as small as possible, includes the kitchen and garage areas and the area of the coal chute and basement door.

Most important of all, from the viewpoint of enjoyment, is the garden area, where you may have an outdoor living room in summer time and your kitchen garden.

A modest start in planting should include shade trees and lawn. If a few plants can be purchased for intimate plantings around the house, the picture will be well on its way; if the work must be spread over three or four years, the owner will enjoy seeing the picture take shape.

Good houses require few plants close to them, and well designed plantings for small areas can accommodate only a few woody plants. Herbaceous per-

ennial and annual flowers are important in supplying color and interest in intimate garden areas (usually at the back or sides of the house), but trees and shrubs are always the vital parts of the home landscape.

Some knowledge of the ultimate size and habits of these is important, as this will save money spent on unsuitable plants and for more than can be accommodated without crowding after a few years. Many nurseries provide this kind of advisory service. There are also books for beginning gardeners everywhere.

Attractive planting cannot result

Before and after landscaping the "front area."



from a bristling array of evergreens crowded around a house. Such plantings may be pleasing at first, but they usually undergo disturbing changes in five or six years. Modern homes seldom have foundations so unattractive as to necessitate hiding them.

A few carefully chosen plants to emphasize the doorway and groups composed of one plant, or of three, to soften

the corners are all that are required for the front yard. With this formula the front yard planting becomes simplicity itself. As this part of the grounds presents the house to the outward world, it should be as attractive as possible every month of the year.

DON'T OVERDO THE EVERGREENS

Too many evergreens create a heavy, somber aspect. A few evergreens for accent and deciduous (autumn leaf shedding) shrubs and trees with small leaves, lovely flowers, decorative fruits, and a pleasing pattern of branches in winter, for seasonal interest and character, should make up the well done front yard. The front lawn should be open and unobstructed to furnish a suitable foreground for the house and to make maintenance easy.

Back yard areas should be enclosed; here the family should find it pleasant to rest, to entertain friends and to garden. Hedges provide green walls which make ideal enclosures, and vines and shrubs trained on fences need even less room. The best place for flowers is in small beds inside these enclosures.

Here in the backyard area is your very best opportunity to put old Mother Nature to work, and actually make her pay for the privilege! A kitchen garden of the most modest size can be made to yield surprising dividends in furnishing vegetables for your table during many months of the year.

Here, too, a plan is advisable and your planning should start with an examination of the soil. A friend with farming experience can tell you

what, if anything, is needed to make it productive. Usually turning under barn manure for a few seasons will bring the soil to proper condition.

Then consult your family as to what they would like planted, and remember that the Department of Agriculture and your State University are both prolific sources of information about gardening practice.

ANSWER THE DEMAND FOR MORE CLOSET SPACE*



with

K-VENIENCE

CLOTHES CLOSET FIXTURES

They provide a handy place for everything, keep closets neat as a pin, actually double capacity. A complete line covering every wardrobe need, every closet shape or size.

KNAPE & VOGT MANUFACTURING COMPANY

GRAND RAPIDS, MICHIGAN, U. S. A.

New York City.....1150 Broadway

Boston.....104 Hanover Street

New York.....1700 Sixteenth Street

Philadelphia.....1234 Wakeling

Los Angeles.....757 South San Pedro

Salt Lake City...1421 Sherman Street

San Francisco.....462 Bryant Street

Seattle.....2412 South First Avenue

* Surveys prove that lack of adequate closet space stands out as the No. 1 pet peeve in American homes. A problem easily solved with K-Venience fixtures.



MAN'S CLOSET

MAN'S CLOSET

A. K-Venience No. 2.
Extension Closet
Rod.

B. K-Venience
No. 550.
Trouser-Skirt
Hanger.

C. K-Venience
No. 1179.
Single Hat Holders.

D. K-Venience
No. 777.
Swinging Tie Rack.

E. K-Venience
No. 783.
Two-Tier Shoe
Rack.

Reproduced through the courtesy of Architectural Forum



WOMAN'S CLOSET

WOMAN'S CLOSET

A. K-Venience
No. 782.
Hat Combination
Fixture.

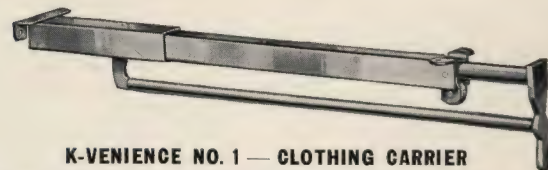
B. K-Venience
No. 784.
Three-Tier Shoe
Rack.

C. K-Venience No. 2.
Extension
Closet Rod.

D. K-Venience
No. 550.
Trouser-Skirt
Hanger.

E. K-Venience
Wishbone
Hangers.

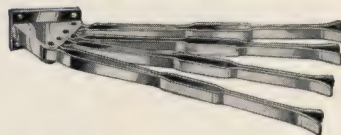
... FOR WELL PLANNED



K-VENIENCE NO. 1 — CLOTHING CARRIER

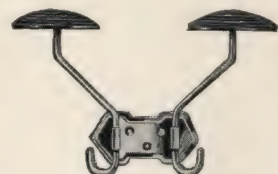
Slides in and out of the closet on ball bearing rollers, carrying garments out of the closet into the light of the room. Doubles hanging space. Made in seven sizes. Adjustable to fit any clothes closet.

12-in. size fits any closet 12 ins. to 16 ins. deep
16-in. size fits any closet 16 ins. to 20 ins. deep
20-in. size fits any closet 20 ins. to 24 ins. deep
24-in. size fits any closet 24 ins. to 30 ins. deep
30-in. size fits any closet 30 ins. to 36 ins. deep
36-in. size fits any closet 36 ins. to 42 ins. deep
42-in. size fits any closet 42 ins. to 48 ins. deep



NO. 550 — SWINGING TROUSER HANGER

Holds 4 pairs trousers, full length, by the cuffs; always in press, easily accessible. Also women's skirts. Each arm swings individually. Fastens anywhere. 13 1/2 inches long.



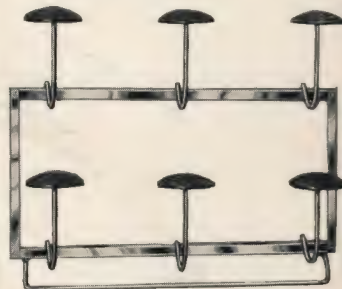
NO. 6 — HAT HOLDER

A closet or hall fixture that looks well, and serves its purpose to equal advantage. Arms swing to desired position. Fills a need in every home.



NO. 3 — GARMENT BRACKET

Extra long and strong for as many as 8 coats or a dozen less bulky garments. Allows hanging more clothes in less space. 10 ins. long.



NO. 782 — HAT HOLDER COMBINATION

Particularly suited for use on back of closet door. Cares for six hats on broad black knobs and has bar for scarfs, ties, belts, etc. 20 1/2" wide, 18 1/2" high.



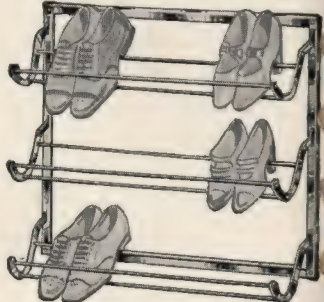
NO. 1182 — SHOE RACK

8 ins. long closed, 32 ins. extended full length. Holds any size adult shoe firmly in place by toe guard. Keeps each pair of shoes in perfect condition up off the floor.



NO. 4 — SHOE RACK

Keeps shoes off the floor in neat and orderly arrangement. Adjustable from 18 ins. to 32 ins. in length to fit available space. Toe guard prevents shoes falling off swinging door.



NO. 784 — THREE-TIER SHOE RACK

Holds 8 to 12 pairs of shoes firmly with toe guard — in perfect condition, off the floor, and in convenient reach. 20 1/2" wide and 26" high to fit on closet door or wall.

WRITE FOR COMPLETE

WELL MANAGED HOMES



K-VENIENCE NO. 2 — EXTENSION CLOSET ROD

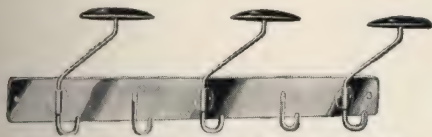
Easily attached to wall or hook rail. Four sizes.

18-in. size—adjustable from 18 ins. to 30 ins. in length

30-in. size—adjustable from 30 ins. to 48 ins. in length

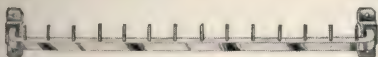
48-in. size—adjustable from 48 ins. to 78 ins. in length

72-in. size—adjustable from 72 ins. to 96 ins. in length



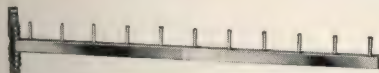
NO. 786 — HOOK STRIP AND HAT RACK

Has hooks for clothing, and swinging hat holders for hats. More attractive than other wall hooks and better for hats. Easily mounted on any wall or closet door. 24 ins. long.



NO. 772 — TIE RACK

Attractive square wire rack with divider pins arranged for side fastening to heavy part of door frame. Keeps them hanging straight, in full view, and avoids costly wrinkling. Length overall 20 inches.



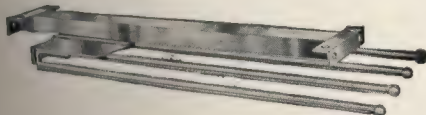
NO. 777 — SWINGING TIE RACK

Square arm, set with dividing pegs, swings to left or right against wall or door when not in use. Keeps ties in perfect order. Arm 18 ins. long.



NO. 771 — TIE RACK

Nothing like it for ties. Holds 36 ties each in separate space or twice as many by doubling up. Pulls out from closet door or wall placing all ties in view for ready selection, then folds back locking ties in place. 20½" wide.



NO. 798 — DISAPPEARING TOWEL RACK FOR UNDER-SINK CABINETS

A practical rack that slides out at a touch, then back out of sight and out of the way. Towels slip conveniently over free ends of four parallel bars. Excellent drying rack. Length 20 ins. Space required 8 ins. wide. Exposed parts, polished chrome.

PRICE INFORMATION

HALL CLOSET

A. K-Venience No. 1125.

Double Hat Rack.

B. K-Venience No. 778.

Umbrella and Cane Holder.

C. K-Venience No. 782.

Hat Combination Fixture.

D. K-Venience No. 784.

Three-Tier Shoe Rack.

E. K-Venience No. 3. Garment Bracket.

F. K-Venience No. 2. Extension Closet Rod.



HALL CLOSET

Reproduced through the courtesy of Architectural Forum

BEDROOM CLOSET

A. K-Venience No. 1. Clothing Carrier.

B. K-Venience No. 786.

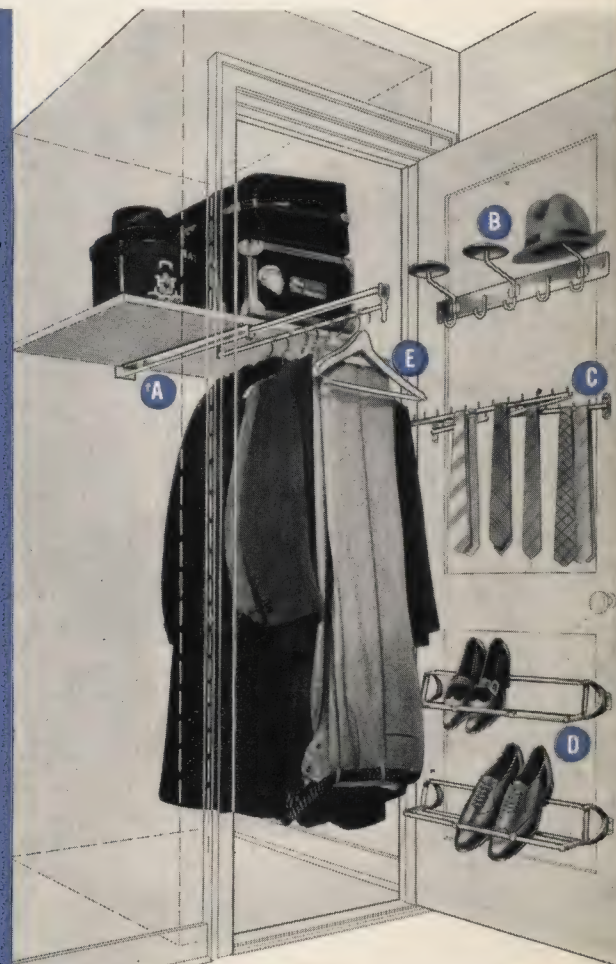
Hat and Coat Rack.

C. K-Venience No. 771.

Hol-Mor Tie Rack.

D. K-Venience No. 4. Shoe Racks.

E. K-Venience Wishbone Hangers.



BEDROOM CLOSET

At last—a sure cure for that old "closet complaint" which has plagued architects, builders and home owners for years. With K-Veniences—your closet worries are over. Smart, modern fixtures—sturdily built, that not only save cubage costs where necessary, but also insure the most efficient use of whatever closet space is available and at the same time keep all apparel orderly, in quick, handy reach. Think of the added living comfort and appeal of closets equipped with shoe racks, hat holders, trouser and skirt hangers, tie racks, and other fixtures in the K-Venience line, se-



lected according to individual family needs. What a relief from the closets we used to find—usually a few impractical single hooks and the inadequate closet pole. Now—with K-Veniences, so inexpensive—so easily and quickly attached—and so eternally

useful—the solution to Mrs. America's demand for more closet space is simple indeed.

Write today sure for latest catalog—showing complete line of more than 40 practical, space-saving K-Venience fixtures—also net prices. Feel free at any time to call upon our Closet Planning Bureau for assistance. No obligation whatsoever.

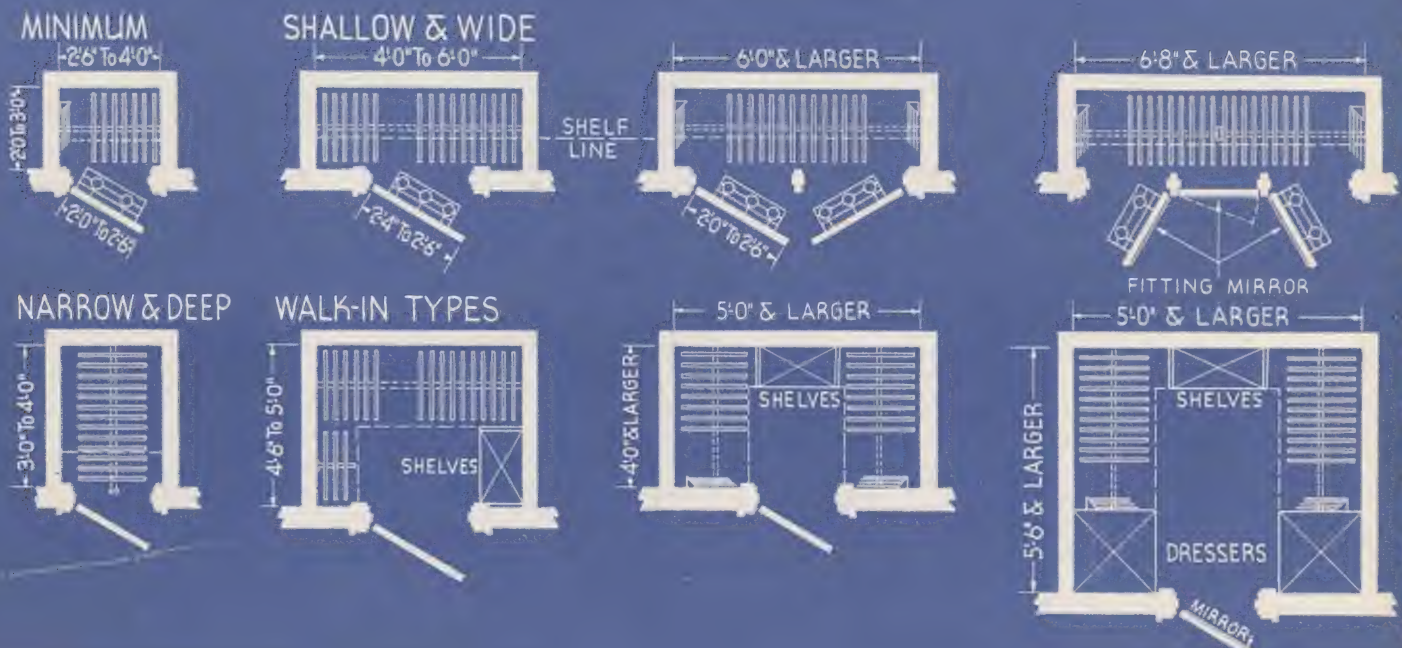
MINIMUM AND ADEQUATE CLOSETS — TYPICAL 6-ROOM HOUSE

First Floor	Minimum	Cu. Ft.*	Adequate	Cu. Ft.*
Hall or coat closet	2'-0" x 3'-0"	54	3'-6" x 3'-6"	110
Cleaning closet	2'-0" x 2'-0"	36	2'-6" x 3'-6"	79
Utility closet	—	—	2'-6" x 3'-0"	68
Living room closet	—	—	1'-6" x 3'-0"	40

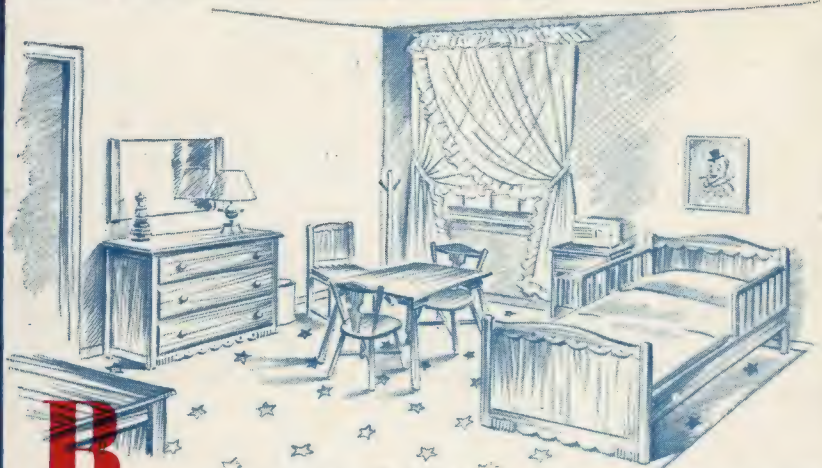
Closet planning is mostly a matter of filling the area of a floor plan with usefully designed units. As the diagrams below indicate, this may be done with almost any shape, provided minimum dimensions are main-

Second Floor	Minimum	Cu. Ft.*	Adequate	Cu. Ft.*
Linen closet	2'-0" x 2'-0"	36	2'-0" x 4'-0"	72
Double bedroom	2'-2'-0" x 3'-0"	108	2'-2'-6" x 4'-0"	180
Single bedroom	2'-0" x 3'-0"	54	2'-6" x 4'-0"	90
Single bedroom	2'-0" x 2'-6"	45	2'-6" x 3'-0"	68
Trunk or Attic Storage	4'-6" x 6'-0"	122**	5'-0" x 8'-0"	180**
Total Cubage		455		887

tained and appropriate fixtures are properly placed. In addition to those shown many irregular or angular shapes are entirely feasible and can easily be made useful and convenient with a little thought.



Child's Bedroom—Sloane Linoleum Pattern No. 278



Because modern home decoration starts from the floor up, it is significant that Sloane Linoleum was selected for five rooms in the No. 1 Model Home in the "Town of Tomorrow" at New York's World's Fair.

THE SLOANE LINOLEUM FLOORS IN THESE FIVE ROOMS OF THE WORLD'S FAIR MODEL HOME COST ONLY \$97.75, INSTALLED*



• Sloane Linoleums offered the decorators not only a wide choice of colorful patterns to accent the gay, cheery atmosphere which is the decorative key throughout; they fitted perfectly into the cost budget of the designers. *Think of it—five roomy floors completely covered with genuine in-laid linoleum at a cost of just a couple of cigarettes a day.*

Other qualities favored Sloane Linoleum too. Its long wearability. With but normal care Sloane Linoleum will last for the life of the home itself. And, particularly in those rooms which must do dual duty, the ease with which these floors can be quickly tidied up is important. Just a swish of a light brush or mop and they mirror freshness and cleanliness. Sloane Linoleums are also

stain-proof and resistant to heat and fire.

See these Sloane Linoleums and scores of other intriguing pattern and color combinations at your local Sloane-Blabon dealers. The hostess attending your local Model Home can give you his address—or consult the Classified Telephone Directory. He'll be glad to estimate on your flooring plans without the slightest obligation on your part.

SLOANE-BLABON CORPORATION, 295 FIFTH AVENUE, NEW YORK, N. Y.

Sloane-Blabon

LINOLEUM AND FELT BASE

*AT THE WORLD'S FAIR MODEL HOME

In addition to the two rooms shown here, Sloane Linoleums are used in the Utility Room (pattern No. 397), in the Kitchen (pattern No. 288), and in the Bathroom (Plain Black, White Border). These same Sloane Linoleum patterns ornament the Model Home replicas throughout the country. Freight will, of course, slightly increase this cost at points outside the New York zone.



Playroom—Sloane Linoleum Pattern No. 494

The Best Sales Tool

For Developing New Home Building Business Say More Than a Thousand Progressive Dealers

Two Selections of Back Covers or Make Up Your Own Full Page Advertisement

How to use Small Homes Year Book to locate ready-to-build prospects.

1. Newspaper ads show front cover with coupon. Offer 25c Year Book for 10c (or free) with name and address properly filled out on coupon. (Ask for sample ads.)
2. Enclose printed coupon offering Year Book as above in all your own mailings. Also in mailings of other local firms, utilities, etc., to cooperate in boosting home building in your city.
3. Display Year Book on your counter with sign. Also on counter or windows of home lending institutions, etc.
4. Use on all personal calls to leave with prospects.



Your OWN Home

HOME OWNERSHIP NOW
AS EASY AS PAYING RENT

Don't look forward with eagerness at the end of the day to a homecoming which offers peace and security—the demands on construction which come only with home ownership?

Perhaps you are dreaming of such happiness for a day future—and procrastinating because you fear that it is beyond your financial ability at the present time.

Think it all over! Your habit of taking full and exacting accounts to an accumulation of rent money. You must have a plan to live and you must pay for it.

And if you must continue to pay for it year after year, why not grasp the thought that eventually it will be yours?

For little more than you are now paying for rent you can build your home exactly as you and your wife have always planned. The kind you want your children to be brought up in and which will be the share of some of their fondest memories.

To build a home on one's own is to guarantee the most completely satisfying use of a lifetime. To make a good thing even better in beauty and efficiency can be the happy job of a lifetime.

Home Building Headquarters!

WHEN illness demands—you always call a DOCTOR—
legal problems require the attention of a LAWYER!

When you have home building problems visit your
local expert

THE PROGRESSIVE LUMBER AND BUILDING MATERIAL MERCHANT

(See his name and address on the front cover)



From all parts of the United States through this dealer's warehouses flows a constant stream of quality products selected by his experts for the construction, modernizing, repairs and equipment of YOUR HOME!

For complete small home plans . . . for helpful advice and assistance in financing . . . for invaluable guidance in your selection of dependable home building and equipment products . . . for costs . . . for recommendation on contractor and other services. . .

"The home and its equipment, whether new or modernized, can be only as satisfactory as the quality of products warrants!"

"YOUR DEALER'S SPECIFICATIONS ARE LIKE YOUR DOCTOR'S PRESCRIPTIONS!"

Full explanation of use of this Sales Tool in first insert. Use inserted order blank for quick service either through your association or mail direct to National Home Builders Bureau, New York City.

THE LOW PRICES (3c to 5c) INCLUDE IMPRINTING NAME, ADDRESS AND SLOGAN ON FRONT COVER

Start Things **MOVING** in your town

EVERY TIME A NEW HOME IS BUILT!



The **developer** sells another lot.



The **Building and Loan Association** makes a long term loan.



The **dealer** sells lumber and building materials.



The **contractor** and his men find employment.



The **utility company** adds another meter to its lines.



The **newspaper** gains advertising lineage.



The **department store** gains a home-owning customer.



The **realtor** makes a commission.



The **speculative builder** makes a profit.

WITH THE MOST
Dynamic
PROMOTION IN
SMALL HOME BUILDING HISTORY

THIS IS THE *Dynamo!*

Demonstration Home Number One in the Town of Tomorrow at the New York World's Fair is a smash hit. Already more than 7000 visitors each day!

Every week hundreds of visitors from all parts of the country say, "How can we build a house just like this?"

It is already America's most talked about home in the lower-cost class.

It is around this house that the National Home Builders Bureau, Inc., has created the most powerful and complete localized campaign ever offered for the promotion of home building business.

Under the terms of an exclusive franchise you lift this wonder house right out of the Town of Tomorrow and set it down in your community, WITH ALL THE BACKGROUND OF WORLD FAIR'S GLAMOR AND PRESTIGE.

There has never been a "model" or "demonstration" home in this price class that could approach this World's Fair Number One Home in styling, planning and publicity appeal.

YOU'LL GET UNPRECEDENTED LOCAL COOPERATION

The editor, or in larger cities the real estate editor, of your local newspaper will be quick to see the local news value of your World's Fair Number One Home. A series of fifteen sparkling news

**RIGHT IN YOUR OWN TOWN—
THE NEW YORK WORLD'S FAIR
NUMBER ONE DEMONSTRATION
HOME**



stories is an important part of the promotion "kit" which accompanies your exclusive franchise.

The business manager of your newspaper will appreciate the possibilities of new advertising lineage created by this program. Advertising mats are a second element in your kit.

Your local department stores know that new homes with all that is implied in restyling and re-equipping, mean new business. They will see the promotional value in furnishing your replica of Number One Home just like the original on the World's Fair grounds. Here in the lower-cost class is a new vista of merchandising profits. They will see the value in tie-ins with their news-



paper advertising, display windows and home furnishings department.

Your local gas company will be interested to know that gas is used for the four big jobs—space heating, water heating, cooking and refrigeration.



Your local electric utility will likewise see the desirability of tying up their local advertising with the many electric appliances and particularly with the I.E.S. lighting equipment specified for every room.

YOU'LL HAVE THE WHOLE TOWN TALKING

Your ads and news stories in the local newspaper, the cooperation you will get from the institutions and groups above mentioned will unfailingly get your World's Fair Number One Home talked about—will unfailingly bring crowds of people to

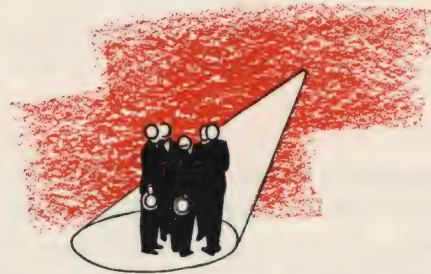


your opening day ceremony and every day thereafter during the weeks of public inspection. Judicious distribution of the Small Home Builders Year Book, published by the sponsors of the World's Fair Number One Home, will create further interest. So will the charming three-

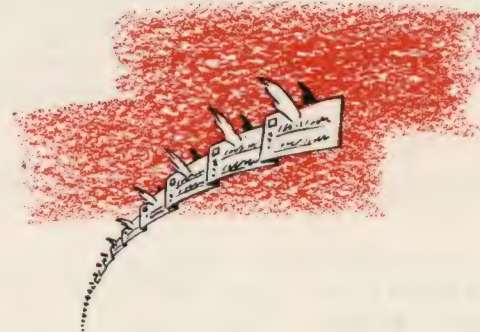
dimensional window display suitable for use in your leading bank or department store window. An adequate supply of Yearbooks and one of the window displays are likewise included in your promotion kit.

YOU'LL GET THE SPOTLIGHT

As a result of the publicity that will be given to your World's Fair Number One Home, considerable publicity will accrue to you as the man who



had the initiative to "start things moving." In fact, you can "write your own ticket" as to the extent to which you want to be identified with the whole promotion. Your local newspaper, for example, will no doubt be glad to feature a pic-



ture of you receiving the franchise award plaque which comes with your kit.

It is important, also, that your name will be displayed in the original World's Fair Number One Home, and there will be seen by the many visitors from your own home town. Incidentally, it is part of the franchise agreement that all inquiries from your city will be forwarded to you.

Today, almost three million American families pay rent of \$30 to \$40 per month while less than two million own homes under the same operating costs. Almost five million families pay monthly rentals of \$25 to \$30 per month while only one-third as many own homes in this operating bracket!

Last year, 245,000 moderate-cost homes were built and sold in the United States! Almost four million automobiles were sold.

The automotive industry has found recovery because it has realized and MET the demand for LOW-COST cars and because it offers for sale COMPLETE automobiles! It has realized that this great market is not primarily interested in the performance of crankshafts, carburetors or differentials—but in the performance of the WHOLE car!

But the building industry has not yet aimed at the MARKETS OF THE LOW-COST HOME. It is still thinking in terms of bricks, boilers and bathtubs INSTEAD OF SELLING WHOLE HOUSES!

With a positive knowledge of the foregoing facts (based on a three-year coast-to-coast intensive survey) and the proven results of a practical experiment (which is our Demonstration Home Number One in the New York World's Fair, "Town of Tomorrow"), we introduce to you the nationally sponsored "package" house which employs the products of over 30 leading manufacturers of the building industry, insuring good "parts"—but which comes to your public as a WHOLE home.

Mr. W. Wadsworth Wood, President
National Home Builders Bureau, Inc.
572 Madison Avenue
New York City

Yes, I want to start things moving! Please send me the preliminary promotion kit on your World's Fair Number One Home as described above. I enclose my check for \$10 which you will return to me, if I notify you within ten days that I am not going to proceed with your promotion and at the same time return your preliminary kit.

Name

Firm Name

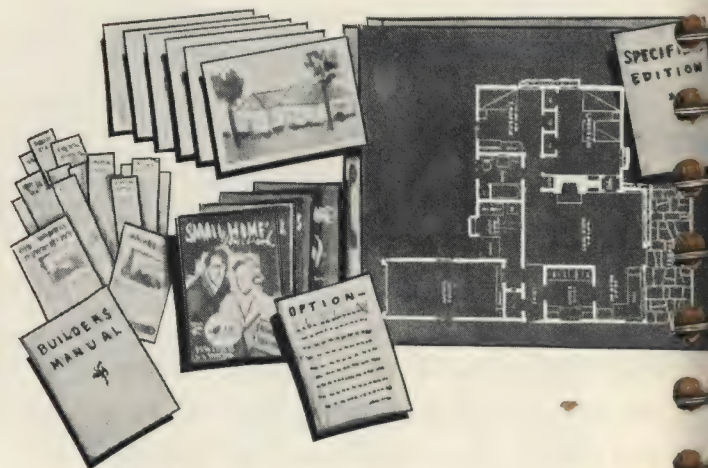
Address

Your First Step

This World's Fair Number One Demonstration Home promotion is dynamic—and COMPLETE. The promotion kit already referred to includes beside the many items mentioned, six sets of blueprints, working drawings and specifications, stencils and directions for making the necessary directional sign boards and front lawn displays. There are 15 publicity releases, four advertising mats and 500 copies of the Small Home Builders Year Book now on sale at news stands throughout the nation at 25 cents. Other materials include valuable door prizes and a manual describing the "seven simple steps for a successful selling campaign based on this World's Fair Number One Demonstration Home."

Your first logical step is to determine the actual cost of building this World's Fair Number One Home in your community. In order to do this, it will be necessary for you to have working drawings, specifications, photographs, etc.

On the receipt of a \$10 deposit we will send you a preliminary kit consisting of:



- 10 original photographs of the Dual Duty House.
- 2 sets of working drawings, specification, etc.
- 3 sample newspaper articles with an outline of the entire series.
- Builders Sales Manual.
- A copy of the current edition of the Small Home Builders' Year Book.
- A 10-day option agreement on the exclusive franchise for your city.

The \$10 deposit is returnable if you decide not to go ahead and when you return this preliminary kit. On the other hand if you decide to proceed with this promotional campaign in your community, we will furnish you with all the material and services listed herein and give you the exclusive franchise for building the Number One Dual Duty House in your community.

Our fee for the exclusive franchise is so moderate that it may be included under an FHA Approved loan for "architectural services." Therefore it can legitimately be included in your overall cost when you establish the price to the purchaser. We make our profit otherwise.

Get the FACTS

DEALER PRODUCTS BULLETIN



NATIONAL HOME BUILDERS BUREAU, Inc.

DEALER SERVICE DIVISION, C. Stanley Taylor, *Director*

572 MADISON AVENUE, NEW YORK

Series A - Special

Issued March 15, 1940.

A New Free Service of Practical Value

Here is a new and highly practical source of information for lumber and building material dealers - that costs you nothing! Facts, all the facts, dealers want about building materials and how to handle them profitably. Reliable, complete data about new materials; to make it easy for you to decide whether or not to add them to your line. New developments about established products, such as new prices, discounts, sales promotion methods, handling economies.

This new, free service takes the form of accurate and informative Dealer Products Bulletins. Reliable as an up-to-date encyclopaedia, each bulletin presents the facts about some dealer product, analyzed and interpreted by the leading organization of marketing consultants in the home building field. A careful reading of the following presentation will pay you well.

DEALER PRODUCTS BULLETINS

In these days when dealers are offered hundreds of different products to handle and sell, it is difficult for them to decide what items will be the most profitable. Competition among manufacturers for the dealer's business is often confusing; for the dealer cannot carry all brands of similar products, but wants those offering the greatest likelihood of profitable business.

The purpose of these Dealer Products Bulletins is, therefore, to present all the facts and nothing but the facts about the products discussed. And to present them in terms of the dealer's own interests. What is the market, who buys the product, what are the prices - the profit margin; what about stock requirements, dealer aids, advertising background; what is the manufacturer's dealer policy; what selling methods are effective?

Each Dealer Products Bulletin presents a single product or type of product which lumber or building material dealers may profitably sell. They are of handy filing size and conveniently punched for placing in a ring or post binder.

These bulletins are prepared by the National Home Builders Bureau, publishers of the Small Homes Year Book and Small Homes Data Book. They are not written or dominated by the manufacturers of the products presented. Each product is carefully studied, the manufacturer's sales and advertising program is checked, his dealer policies are examined, laboratory and field tests are scrutinized - before a bulletin is prepared.

No statements made in these bulletins are intended to urge dealers to carry the products discussed. The facts are presented - the dealer makes his own decisions - free from sales pressure.

These Bulletins Are Free to Selected Dealers

These bulletins have two important values. To the dealer they represent a solution of the troublesome problem of getting reliable and complete facts about the products covered. To the manufacturer they represent a logical and economical means of conveying an unbiased interpretation of their products to the better type of dealers. Dealers cannot individually afford the cost of these studies and interpretations for the many products of interest to them. The manufacturers are naturally in a position to bear the expense with regard to their own products.

All costs involved in the preparation and distribution of these bulletins are paid for by the manufacturers who adopt this method of securing an unbiased presentation of their products to dealers.

There is no cost or obligation to any dealer.

The fact that this announcement reaches you (in the SMALL HOMES DATA BOOK) indicates that your firm is on the carefully selected list of better class dealers to whom (on request) forthcoming bulletins will be sent without cost.

Value to Dealers

Purpose and Use

Unbiased Interpretations - No Sales Pressure

Why They Are Free

No Cost or Obligation to Dealers

*Bulletins Sent Only to
Headquarters or au-
thorized Branches*

This selected list includes only the main office of dealer organizations having branches or line yards. National Home Builders Bureau, will be glad, however, to send one copy of each future bulletin, free of charge, to any branch yards you may operate, providing their managers have authority to purchase. It is only necessary to send the correct names and addresses to this organization, on your letter-head.

How to Use These Bulletins

Subjects Covered

These bulletins will not only present new products to dealers but will also present new and helpful data about well-established materials.

*Bulletins About New
Products of Dealer
Interest*

When new products are presented the analysis will be complete in every detail. A typical outline of the questions such bulletins will answer follows.

Facts You Want to Know About New Products

A. The Product and Its Use

1. *What is this product?* - general description.
2. *What is it used for* - its purpose?
3. *Who buys this product?* - Carpenters, masons, contractors, speculative builders, building owners, etc. Do architects specify it, and are specifications closed or open?
4. *What products are associated with it* - and therefore may be sold with it? Example: Product is metal lath; sale may involve sand, lime, hair, cement, patent plasters, etc.
5. *What does it compete with?* - Does it conflict with or displace lines the dealer already handles? Is it a specialty?

B. Prices, Stock and Handling

6. *What does it sell for?* - Approximate retail price.
7. *What does it cost the dealer?* - Mark-up or profit margin.
8. *What is the unit of sale?* - How many units are bought by the average customer? What turnover may be expected, etc.?
9. *How much stock must the dealer buy or carry?* Carload and L.C.L. prices or other wholesale units of sale. Trial orders.
10. *What terms and credits are granted dealer?* Time payment plans, etc.
11. *How is the product packaged, stored and handled?* Space requirements for typical stock. Protection against spoilage. Economical methods of handling. Rebates on containers.

C. How to Sell Product

12. *Is the product advertised and nationally known?* What is manufacturer doing to build up acceptance and to develop markets?
13. *How should the product be displayed?* - Samples, displays, signs, demonstrators, etc., offered by manufacturer.
14. *What literature and other dealer aids are available?*
15. *How much sales promotional work should the dealer do?* Is it necessary to build up local markets? Who should be contacted?
16. *What features should the salesman present?* - This involves a complete analysis of the selling points, expressed in the manner most helpful to the dealer or his salesman.

DEALER PRODUCTS BULLETIN

17. *What practical or technical information about the product's use or installation should the dealer be able to impart to his customers?*

D. Performance of Product

18. *What proof of performance, tests, experience or other evidence establishes the relative quality and desirability of the product? Here is required testimony or direct evidence of quality, character or performance justifying manufacturer's claims.*

E. The Manufacturer

19. *What manufacturer is back of this product?*
20. *What are the manufacturer's dealer policies? Is there full dealer protection? How does he service his dealers?*
21. *What type of dealer franchise is customary?*
22. *What other products does manufacturer have?*
23. *Where can dealer secure final details?*
24. *Certification* - A statement signed by the Director of the Dealer Service Division substantially as follows: The foregoing analysis has been prepared by the marketing staff of the NATIONAL HOME BUILDERS BUREAU, and represents a considered opinion as to the merits and qualifications of this product for dealer distribution.

When some established product is presented the basic facts will be very briefly reviewed to avoid covering familiar ground. Emphasis will be placed upon some new development of special interest. For example, one manufacturer may employ a bulletin to announce a change in dealer policy, a new price basis or new discounts; another may present some new sales method or plan or some advertising or direct mail program which dealers may capitalize. Whatever the subject of the bulletin you will get *facts* that fit your business.

*Bulletins About
Established Products*

Special Information Service to Dealers

If you want an unbiased analysis of any dealer product not covered in prior bulletins, write to the NATIONAL HOME BUILDERS BUREAU, naming the material in which you are interested. If a bulletin on that material is not to be issued in the near future, a *special* report will be sent you free of charge.

*Information About
Products Not Covered
in Prior Bulletins*

Inquiries of this type are welcomed. Use this service when you are being solicited to carry some new line of materials. Use it when you get a request for building materials you do not carry and are not familiar with. The need for this free special service is greatest right now because there are no "prior" bulletins to which you may refer. Your inquiries, indicating what products are of special interest to you, will assure you that forthcoming bulletins will cover the needs of the greatest number of dealers.

Who Prepares These Bulletins?

The bulletins are prepared exclusively by members of the senior staff of the National Home Builders Bureau, Inc. This organization is unique; it is the only firm of publishers and marketing counselors serving the home-building industries exclusively. Its high standing is attested by its publications and clientele, including many leading manufacturers of home building products, trade associations and distributors and retailers of this field.

*Facts About The
National Home Builders
Bureau*

The senior staff of the National Home Builders Bureau includes W. Wadsworth Wood, President; C. Stanley Taylor, Vice President and General Manager; and Jamieson Marshall, Sales Engineer. They are widely known for their outstanding work in merchandising activities of the building field, and particularly, they possess an intimate knowledge of the problems and merchandising methods relating to products which are or should be distributed through progressive lumber and building material dealers.

ANNOUNCEMENT

DEALER PRODUCTS BULLETIN

Constructive Work for Dealers

By the very nature of its work the National Home Builders Bureau is constantly engaged in matters of direct profitable interest to dealers and distributors of the building industry as well as to manufacturers whose products partially or entirely find their outlet through lumber and building material dealers.

Among the major activities of the Bureau may be mentioned:

1. Publishing the Small Homes Year Book with a minimum distribution of one million copies annually, half of which are sold through national newsstand circulation and the other half in bulk to lumber and building material dealers. These dealers use imprinted copies of the Year Book in their own local sales promotional activities distributing them to live home building prospects. This dealer distribution is to a considerable extent carried out officially through the offices of the leading state and regional dealer associations.
2. Publishing the Small Homes Data Book which is a catalog for the home building trades being distributed annually to 16,000 lumber and building material dealers who are members of these state and regional associations.
3. Conducting extensive national promotional campaigns having primarily for their purpose the stimulation of more and better home building and encouraging all home building prospects to seek advice on all problems from the local expert - the progressive lumber and building material merchant. These promotional campaigns include editorial cooperation with national magazines in part or in whole directed to home builders; home building editors of newspapers everywhere; radio broadcasts; and the development of powerful local home building campaigns built around 'model houses', (such as Replicas of the New York World's Fair Dual Duty Home).
4. Providing merchandising consultation and other services for manufacturers and distributors of the home building field.

Reliability of Bulletins Is Assured

Confidence of Dealers Essential to Success

Obviously this organization depends upon recognition of its integrity as well as its thorough knowledge of the building field for its success. Only an organization enjoying the explicit confidence of dealers in its fairness and reliability can successfully operate such a service as the new Dealer Products Bulletins. You may be assured that this position of trust is fully appreciated and jealously guarded.

How Products Are Analyzed and Interpreted

Prior to the preparation of any Dealer Products Bulletin, the marketing staff (senior members of the firm) obtains from the manufacturer complete data about the product concerned. These data are studied with care, checked against laboratory or other tests, and statements are verified wherever their accuracy may be challenged. Following this sifting of facts, the market possibilities of the product are studied in relation to the dealer's normal activities.

Then the bulletin is prepared in preliminary form and submitted to the manufacturer for acceptance. If any changes are made by the latter, they must be supported as to fact; otherwise the National Home Builders Bureau, Inc., will decline to publish the bulletin. In this way the presentation is checked as to accuracy by both the manufacturer and the publisher, while the latter reserves the right to exclude any statement or changes of biased character.

Certification

We pledge to dealers that each Dealer Products Bulletin will be based upon an accurate, impartial and thorough analysis of the subject matter presented, prepared by the marketing staff of the National Home Builders Bureau, Inc., and that it will represent their considered opinion as to the merits and qualifications of the subject matter for dealer distribution or use.

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572 MADISON AVENUE, NEW YORK

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WESTINGHOUSE

Kitchen Planning

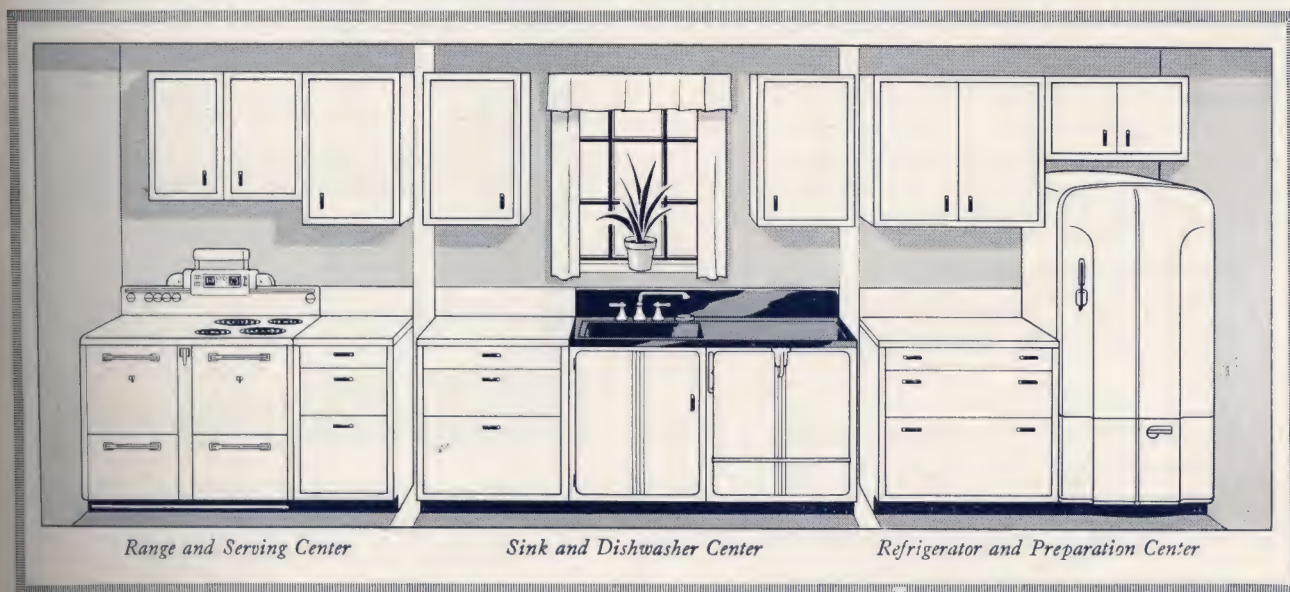
MANUAL

A practical book of Kitchen Planning Fundamentals and Standard Kitchen Plans for architects, kitchen engineers, builders and complete electric kitchen retailers.

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FUNDAMENTALS OF KITCHEN PLANNING



The Basic Idea

Work in any size kitchen boils down to just three major tasks:

1. Storing food and preparing it
2. Cooking and serving it
3. Cleaning up

To do these jobs easier, quicker and better, the homemaker needs an electric range, refrigerator and dishwasher—each *served* by a group of storage cabinets and a stretch of work surface. Each division—of appliances, cabinets and work surfaces—is called a *work center*.

These three *centers*, properly arranged and outfitted with utensils, dishes, equipment, etc., and in the right relation to each other—so work flows in a straight line from one *center* to the next—make up the basic planned kitchen.

Organization of each Center Important

The organization of each *center* is just as important as its relation to the other two. Food supplies, utensils, equipment, dishes, et cetera, must be grouped and arranged properly in each *center*, or the kitchen loses some of its over-all, step-saving efficiency.

As the result of studying the steps and motions during the preparation of thousands of recipes and menus, Westinghouse has determined a "best way" to organize each *center* in the Westinghouse ELEC-TRI-Center Kitchen.

Refrigerator and Preparation Center

For complete convenience, this *center* should be located near the outside entry where food is delivered.

Here should be grouped perishable and non-perishable foods, all sorts of baking dishes, salad molds, cake tins, pie pans, flour sifter, graters, mixer, et cetera, because they are first brought into use in this *center*.



This arrangement makes it possible to prepare either a single recipe or food for an entire meal with a minimum number of steps. There should be a generous work surface next to the refrigerator for the actual preparation. As a matter of fact, the most ideal arrangement is a *continuous* work surface, from refrigerator to sink, as so much preparation—paring vegetables, et cetera—requires the use of the sink.

There must be sufficient space between work surface and wall cabinets for the mixer; 16" is standard.

Range and Serving Center

The Range and Serving Center is located near the door to the dining room for convenience in serving.

Following the principle of storing equipment at the point of first use, frying pans, griddles, pot lids, cooking cutlery, coffee maker, tea pot, bread and pastry, toaster, et cetera, are kept in this *center*.



Since most serving dishes are first used at the range, they also are kept here.

Because a Westinghouse Electric Range imposes no danger from flames, it is safe to install upper cabinets 18" above the range.

Sink and Dishwasher Center

Water being used for both preparation and cooking, this *center* should always be stationed between the Refrigerator and Preparation Center and the Range and Serving Center.

A generous work surface, so necessary in the



cleaning-up process, flanks both sides of the sink. According to the established principle of storage, this *center* houses the silver, paring knives, saucepans used for cooking with water, cleaning materials—and provides a ventilated compartment big enough for a week's supply of potatoes. Wall cabinets above the sink and dishwasher hold all glassware, and china not stored over the range.

Wherever possible, sinks should be equipped with double drainboards. A backsplash—from 3" to 8" high—should be used back of the sink proper. Lower ones from 1" to 3" at the back of all counters make cleaning a simpler task. Sinks are generally placed under a window. This is optional however. The dishwasher is usually placed at the right of the sink as it is slightly more convenient for most persons—though conditions at times require its location at the left. It is perfectly good practice to locate it there when necessary.

Electric Water Heaters and Kitchen Planning

The electric water heater is always considered essential to good kitchen planning, and is a "silent partner" of the Sink and Dishwasher Center, for good mechanical dishwashing results depend upon a properly controlled, adequate hot water supply. The square models are most appropriate for kitchen installations. Whether the water heater is located in the basement or the kitchen is not as important, as the fact that the modern electric kitchen, to be complete, must have this efficient appliance.

CABINET STORAGE REQUIREMENTS

Thanks to five years of intensive research, a scientific formula has been developed to determine the *correct* amount of cabinet storage for homes of every size.

This dependable method was developed by studying and measuring the kitchens and pantries in more than 5,000 homes.

The number of persons in the family cannot be taken as a guide to the amount of storage space required, because that number changes from time to time. It was established that the number of bedrooms determines how many adult persons the house is designed to accommodate—how many persons can live normally in the home. The master bedroom accounts for two adults and the other bedrooms for one each. Thus, a three-bedroom house would normally accommodate four adults.

In other words, the number of bedrooms in a residence establishes the *normal occupancy*. It is upon *normal occupancy* that all calculations of storage requirements must be based for a satisfactory installation.

NORMAL OCCUPANCY OF RESIDENCES

Number of Bedrooms	Number of Persons
1	2
2	3
3	4
4	5
5	6

Formula: Cabinet Storage Space

Further research revealed that six square feet of *upper* cabinet shelf space must be allowed for each adult. After true normal occupancy was determined, it was found that the equivalent amount of shelf space for one person, or six square feet, should be added for entertaining, and another six feet for accumulation. This factor of adding *two persons* in the formula, for entertaining and accumulation, has been proved by innumerable field tests and various social and sectional strata to provide adequately for these conditions in the average home.

Upper cabinet storage space is the cabinet storage space *above* the counter line. This square footage applies to shelf areas only. Cabinet spaces above refrigerator or broom closet are not considered in this formula, as they are somewhat inaccessible and their areas are small.

Base cabinet storage space is calculated on a *linear front foot basis*, because the many variations in this type of storage make a square-foot-shelf-area calculation needlessly complicated. Base cabinets should occupy all the space beneath upper wall cabinets not required by range, refrigerator, and dishwasher.

An exception is when maximum amount of linear footage of base storage is available, with a

shortage of upper storage space, due to window locations. In such cases, make up the difference by installing an upper cabinet, or a tall shelf cabinet, elsewhere in the room—usually in a corner. It is unnecessary to install another base cabinet under this. The important thing is to reach the balance of storage and shelf space *above* the counter. Substandard storage spaces reduce efficiency—make for poor housekeeping—and are the bane of the occupant's existence.

STORAGE REQUIREMENTS FOR RESIDENCES

Number of Bedrooms	Upper Shelf Storage Sq. Ft.	—BASE STORAGE— LINEAR FEET	
		Minimum	Maximum
1	24	3	4½
2	30	4½	6
3	36	6	7½
4	42	7½	9
5	48	9	10½

STORAGE REQUIREMENTS FOR APARTMENTS

	UPPER SHELF STORAGE —Sq. Ft.—		BASE STORAGE LINEAR —FEET—	
	Min.	Max.	Min.	Max.
1 room with alcove kitchen and in-a- door bed	8	12	1¼	2
1 bedroom	12	18	2	3

The slight variations in storage requirements for apartments apply only to the two smallest sizes of apartments. For apartments with two or more bedrooms, use the table given for residence storage requirements.

WESTINGHOUSE EQUIPMENT SPACE REQUIREMENTS

Size of Home	RECOMMENDED REFRIGERATORS		RECOMMENDED RANGES		RECOMMENDED DISHWASHER	
	Model	Width of Space Required	Model	Width of Space Required	Model	Width of Space Required
One Bedroom	4 cu. ft.	25"	Coronet or Conqueror	22" or 39"	DW-31	24"
Two Bedrooms	5 cu. ft.	29½"	Challenger or Diplomat	39"	DW-31 or DW-32 or DW-33	24" or 48" or 48"
Three Bedrooms	6 cu. ft.	31"	Dictator or Regent	39" or 43"	DW-31 or DW-32 or DW-33	24" or 48" or 48"
Four Bedrooms	8 cu. ft.	33"	Emperor	43"	DW-31 or DW-32 or DW-33	24" or 48" or 48"
Five Bedrooms	8 cu. ft.	33"	Emperor	43"	DW-31 or DW-32 or DW-33	24" or 48" or 48"

Minimum dimensions are given in the table on page 5 because these large appliances are of absolute dimensions and cannot be squeezed into smaller spaces or cut down in the field.

Westinghouse Ranges and Dishwashers are uniformly 36" high. All work surfaces of cabinets,

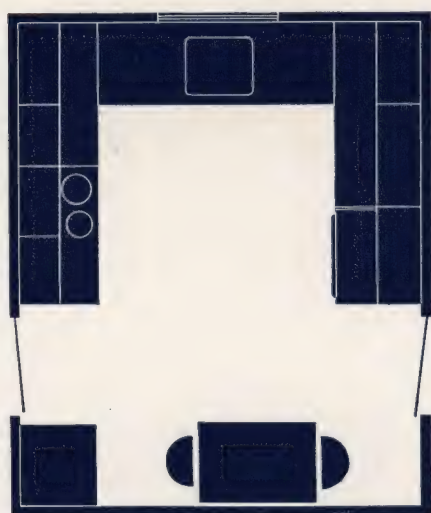
therefore, should measure 36 inches from the floor. They should also be 25" deep, to conform to uniform appliance depth. Wall cabinets should be hung to provide 16 inches between work surface and underside of cabinets except over the range, where 18" is the minimum.

ONLY 7 KITCHEN TYPES

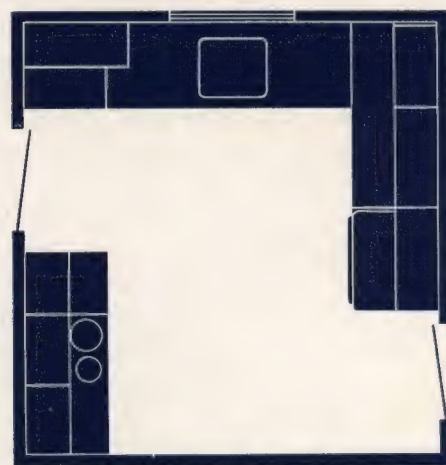
1. "U" Kitchen: The most ideal, because work surface is continuous around three sides of the room and traffic is kept out of working area.
2. Broken "U" Kitchen: Usually requires minimum of structural changes.
3. "L" Kitchen: Highly efficient, with two walls left free for door and window openings.
4. Broken "L" Kitchen. This type, like the broken "U", eliminates expensive structural changes.

5. Individual Center Kitchen: The logical solution for the badly cut up kitchen.
6. Two-wall Kitchen: An ideal arrangement for the small, narrow room.
7. Straight-wall, or apartment type, kitchen: Offers maximum convenience in a minimum of space.

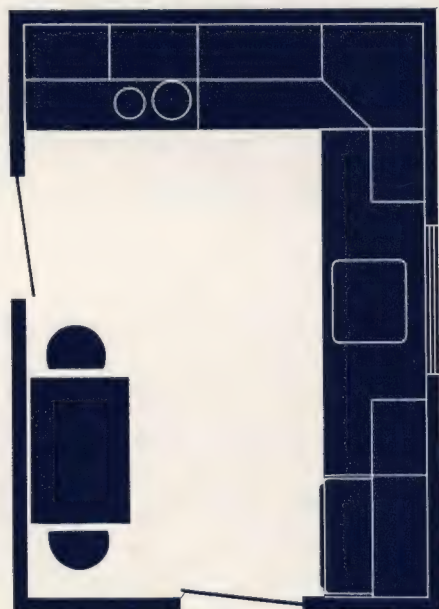
These seven types are shown in diagram, and discussed more in detail on pages 16 to 28, where plans drawn to scale are reproduced for your use.



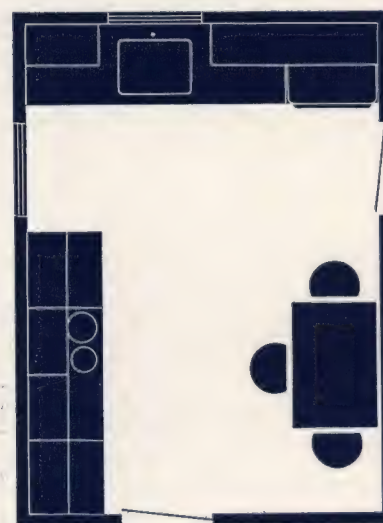
"U" Type



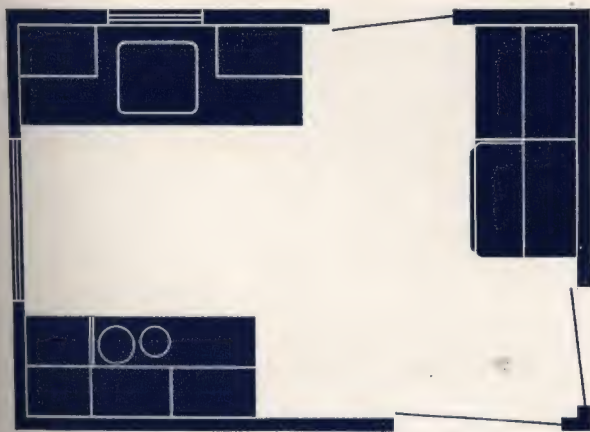
Broken "U" Type



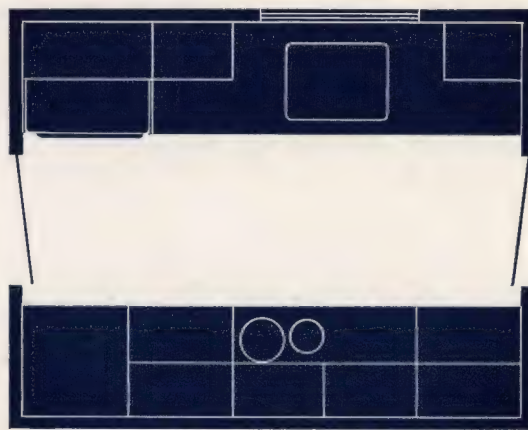
"L" Type



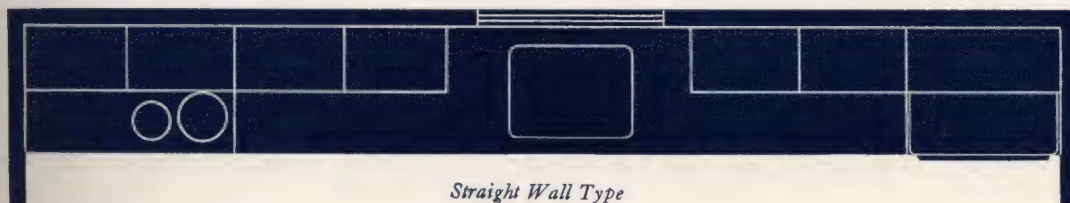
Broken "L" Type



Individual Center Type



Two-Wall Type



Straight Wall Type

COLOR IN THE KITCHEN

The laboratory-type of kitchen is popular with few women. The modern trend is to color. Color expresses personality. Color combinations are infinite, and should be worked out in walls, draperies, bric-a-brac and floor coverings. As a rule it is wiser to find out the client's color preference, and then create a color scheme for her.

Against a uniform background of white kitchen equipment and cabinets, made standard by practically all manufacturers, it is easy to plan such a kitchen color scheme because it involves few materials and colors.

Exposure above all else is important in selecting colors. Cool colors like grey and green for the bright, sunny room, and warm shades like yellow and red for the dark and gloomy kitchen are the accepted rule. The size of the room is important also. The small apartment kitchen can be much gayer than the larger room.

The floor should be relatively dark and har-

monize with the dominating wall color. By using inlaid strips in linoleum floors, unusual and attractive color accents may be obtained.

If a wainscot line is desired, it should be established at the bottom line of the wall cabinets as a boundary of the tiling, linoleum or other materials used above the work surfaces. This line may also be used to good effect in grading up the wall colors from dark to light, placing darker colors below and lighter colors above.

Ceilings must be kept light for two reasons: attractiveness and good illumination. Kitchen experts usually prefer to paint the soffit the color of the walls rather than the color of the cabinets or the ceiling.

The 16 color schemes worked out by Mary Davis Gillies, McCall's Magazine, may be helpful in guiding clients to a proper choice. The color charts shown on the following page are reproduced through the courtesy of McCall's.

WARM COLOR SCHEMES FOR DARK KITCHENS

Cabinets	Floor	Walls	Doors and Window Muntins	Cornice	Window Curtains and Blinds or Shades	Accessories
White	Blue Marbleized Linoleum	Ivory	Red	Ivory	Shades or Blinds—Ivory Tapes —Red Curtains —Red	Red-Blue
White	Black Marbleized Linoleum	Rose-Beige	Beige	Beige	Blinds —Beige Tapes —Rose-Red Curtains —Rose-Red	Rose-Red Black and Copper
White	Green Marbleized Linoleum	Clear Light Yellow	Green	Chromium Strips	Blinds —Green Tapes —Yellow Curtains —Yellow and Green	Red-Orange Green and Black
White	Black Marbleized Linoleum, Red Inserts	Lipstick Red	White	Chromium Strips	Blinds —Lipstick Red Tapes —White Curtains —White Oil Cloth Red Tape Trimming	Black, White and Red
White	Light Brown Marbleized Linoleum	Lipstick Red	White	Chromium Strips	Blinds —Cocoa Brown Tapes —White Curtains —Blue-Green	Blue-Green Metallic Tones, Cocoa Brown
White	Terra Cotta Linoleum	Mustard Yellow	Pale Grey	Chromium Strips	Blinds —Terra Cotta Tapes —Grey Curtains —Yellow	Grey, Black Terra Cotta

COOL COLOR SCHEMES FOR SUNNY KITCHENS

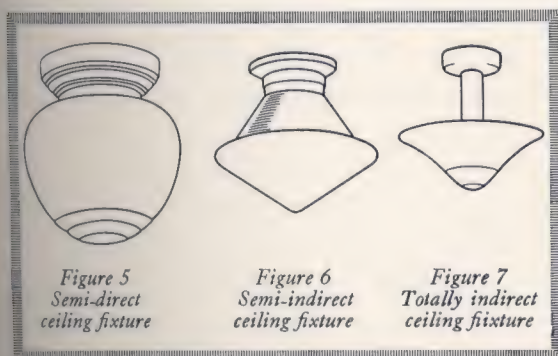
Cabinets	Floor	Walls	Doors and Window Muntins	Cornice	Window Curtains and Blinds or Shades	Accessories
White	Blue Marbleized Linoleum	Pale Lime-Green	Blue	Chromium	Blinds or Shades —Lime Green Curtains —Blue	Blue, Green and Yellow
White	Black Marbleized Linoleum, Yellow Inserts	Pale Ice Blue	Ice Blue	Chromium	Blinds or Shades —Yellow Curtains —Grey and Yellow	Black, Grey, Aluminum and Yellow
White	Light Clear Green Linoleum	Pale Ice Blue	Ice Blue	Chromium	Shades —Delphinium Blue Curtains —Green	Green-Blue Aluminum and Yellow
White	Citron Green Linoleum	Pale Yellow	Pale Yellow	Chromium	Shades or Blinds —Citron Green Curtains —Pale Yellow and White Modern Chintz	Aluminum and Yellow
White	Grey Marbleized Linoleum	Grey(Micarta) Horizontal Joints Covered With Copper Strips	Grey	Copper Strips	Shades or Blinds —Grey Curtains —Metallic Copper Revolite	Aluminum Copper and White
White	Brown Linoleum	Blue	Blue	Tan	Shades or Blinds —Blue Curtains —Tan	Blue, Tan and Orange

PLANNED KITCHEN LIGHTING

The kitchen is the workshop of the home and should, therefore, be well illuminated. It is vitally important that the room be free from glare and shadows. A central ceiling fixture is not enough. Supplementary fixtures are needed—and so placed that the homemaker never works in her own shadow, regardless of where she stands. Every type kitchen requires: Light for general illumination and light at the range, refrigerator, and sink work centers.

General Lighting

A central ceiling fixture of semi-direct, semi-indirect or totally indirect design should be installed to provide general room illumination, (See Figures Nos. 5, 6, 7.) The watt size of the lamp in it depends upon the size of the kitchen. A 150-watt lamp is about right for a 10' x 12' kitchen, if supplemented by other fixtures.



Light at the Centers

The second essential for a correctly lighted kitchen is to provide ample light at each *center*. Otherwise the housewife stands in her own light, with her back to the central ceiling fixture, thus casting a shadow over her work.

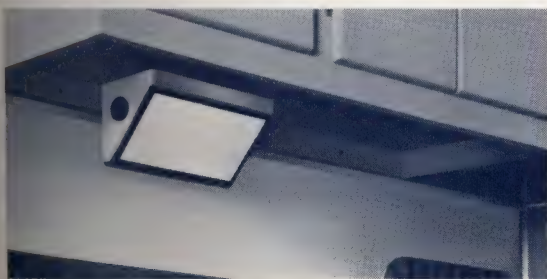


Figure 8
Panel light built in the bottom of the wall cabinet

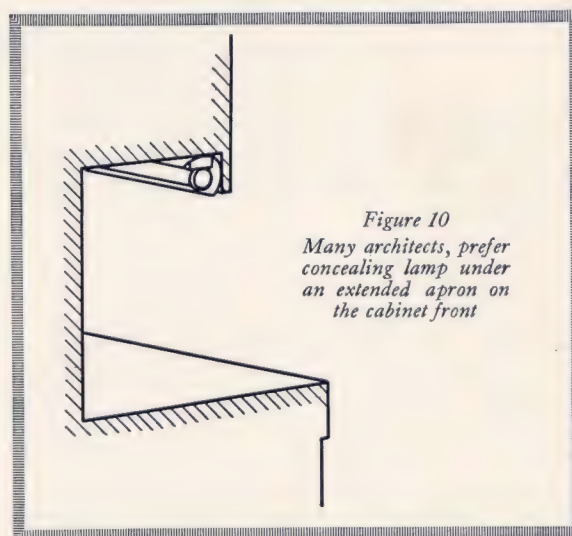
The surfaces of the work centers may be lighted by lamps built in the bottom of the wall cabinets; or by lumiline lamps (a tubular lamp 12 or



Figure 9
Lumiline lamp installed in bottom of the wall cabinet

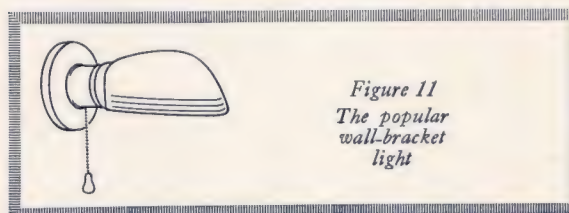
18 inches) in glass or metal reflectors mounted under the cabinet (Figures No. 8 and 9).

A lamp concealed under an extended apron on the cabinet front (Figure No. 10) is also used.



Light at the Sink

The Sink and Dishwasher Center is usually placed under a kitchen window. Therefore, the architectural features of the window determine to some degree the kind of local lighting planned here. The lighting may be a pair of wall brackets, (see Fig. 11), a smaller unit matching the central ceiling fixture, or a diffusing panel recessed in the soffit over the sink (see illustration No. 12 on next page). The panel requires a lamp of at least 100-watt intensity. A choice of one of these units will provide adequate light with no shadows for this important *center*.



Light at the Range

Unless a well-designed lighting unit is incorporated as part of the range, special lighting must be planned. Good illumination at the range is a safety as well as a convenience. Wall brackets with glass or metal shades may be located over the range (see illustration No. 13).



Figure 12
The over-sink diffusing panel recessed in the soffit



Figure 13
Wall bracket with metal shade

If cabinets are built over the range, lights may be concealed under the bottom to illuminate the range. Lamps of 40 to 60-watt capacity are recommended.

Switches and Convenience Outlets

The switches, for the ceiling light, are usually located near the doors so there is no need to grope in the dark.

The local lighting units over the sink, range and work centers should be controlled by switches below or on the fixture. Wall units are available for work centers that combine a light and a convenience outlet (illustration No. 14).

At least one twin convenience wall outlet should be installed in each center with additional ones for the refrigerator and dishwasher. Not more than two of these twin outlets should be on a single circuit. A separate circuit for the refrigerator plug is also desirable.

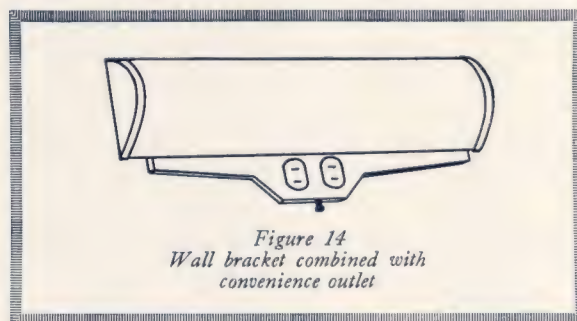


Figure 14
Wall bracket combined with convenience outlet

CHAPTER II

INDIVIDUAL CENTERS AND STANDARD KITCHEN PLANS

The preceding chapter has established the fundamentals of kitchen planning applicable to any one of the seven types of kitchens discussed in this chapter. In using these fundamentals three steps should be carefully studied.

FIRST: Definitely establish which type of kitchen is to be used.

This is a most important decision. Start with the No. 1 type, or the "U" shape kitchen because this is the most ideal type, and study carefully the application of each type to the specific case before making a decision.

This is particularly essential in homes already built where doors and windows are, naturally, governing factors. We do not recommend structural changes in such homes merely to conform to specific types unless it is absolutely necessary. In the new home, however, a kitchen should be planned from the inside out in every detail.

SECOND: Establish the minimum requirements of storage and equipment space.

This definitely influences the type of kitchen selected for *modernization* jobs. As far as possible adhere to the minimum storage requirements for each *center*, or the over-all storage space for a residence of a given size. This factor applies to minimum requirements only.

THIRD: Proper organization of each center—with proper relation between the *centers*—is more important than the establishment of any one *type* of kitchen.

It is the small details of *center* organization that contribute to convenient, comfortable and efficient work. For tests in innumerable homes have proved conclusively that mental hazards are often more fatiguing than actual steps taken.

INDIVIDUAL CENTERS

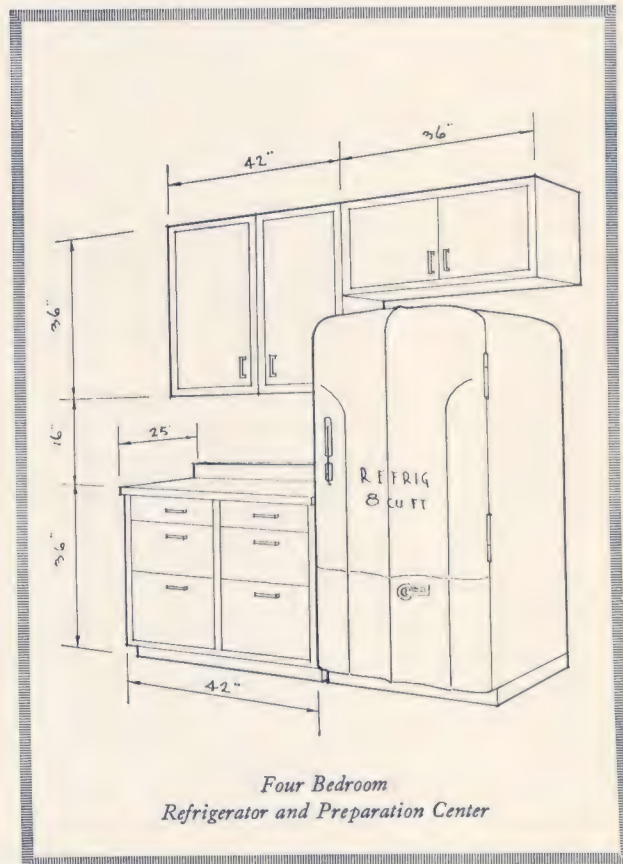
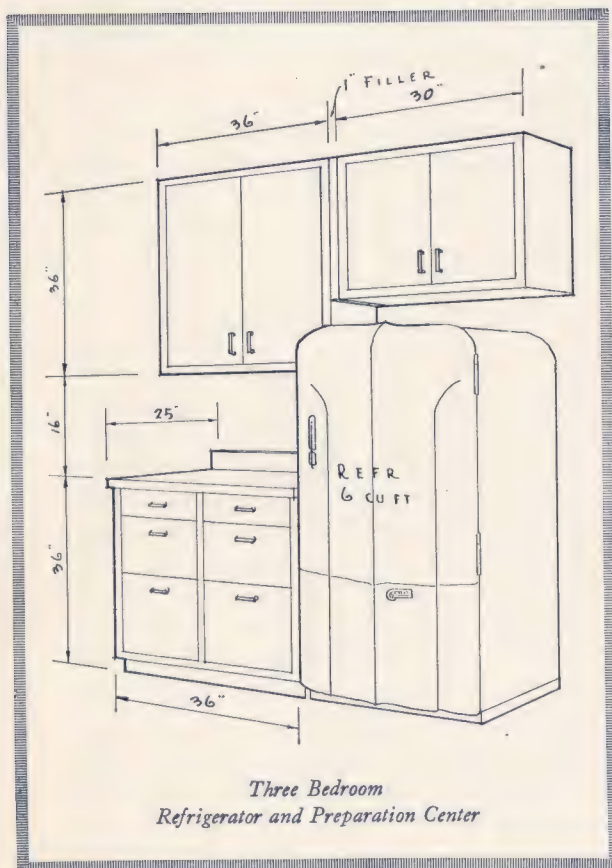
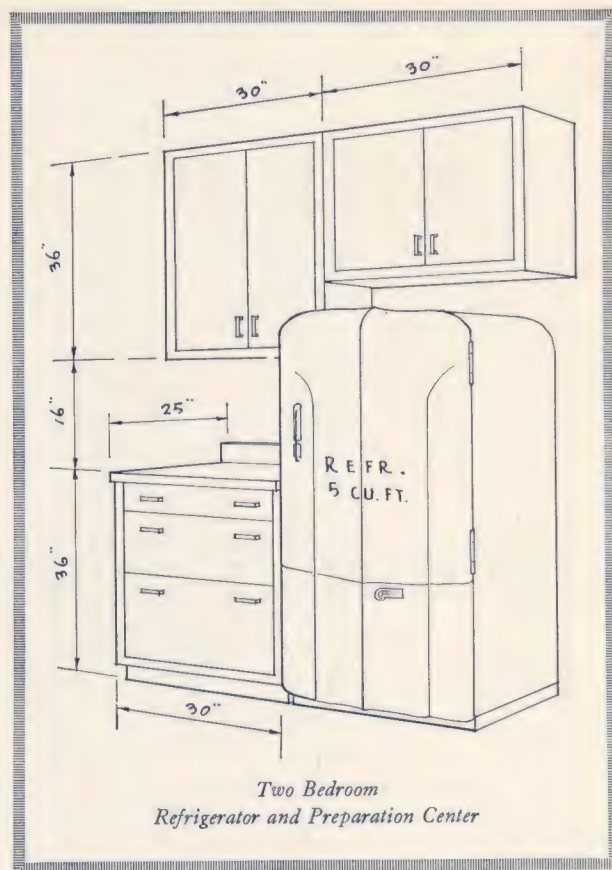
The first step on *center* organization is to establish definite, minimum sizes of individual *centers* where wall space in many homes is limited. Therefore, it is not always possible to install the proper minimum size *center*. Sometimes a two-bedroom *center* must be installed in a three-bedroom house, in order to avoid costly structural changes. In such cases the other two *centers* should be increased in size, in order to have the *total* amount of storage meet minimum requirements.

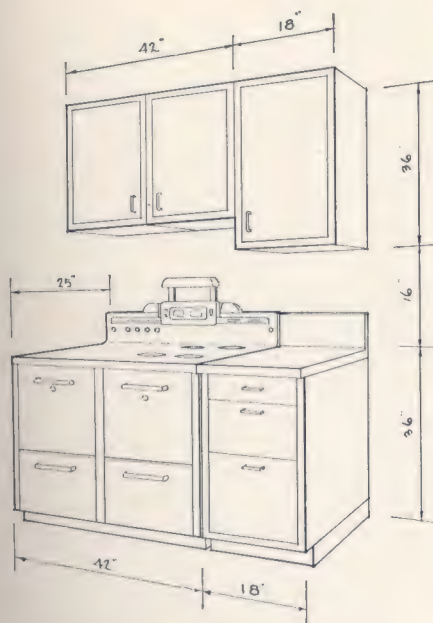
In other instances, homemakers insist upon one *center* being larger than normal. But in the big majority of cases, the minimum-size *centers* as shown on the following pages can be installed without structural changes or difficulty.

REFRIGERATOR AND PREPARATION CENTERS

For 2, 3 and 4 Bedroom Residences

The sketches on this page show minimum sizes established for Refrigerator and Preparation Centers for residences of two, three and four bedrooms. Cabinet and work surfaces are standard size.

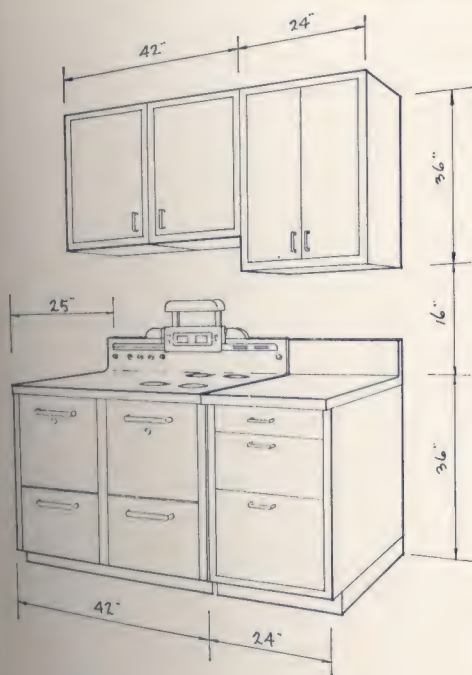




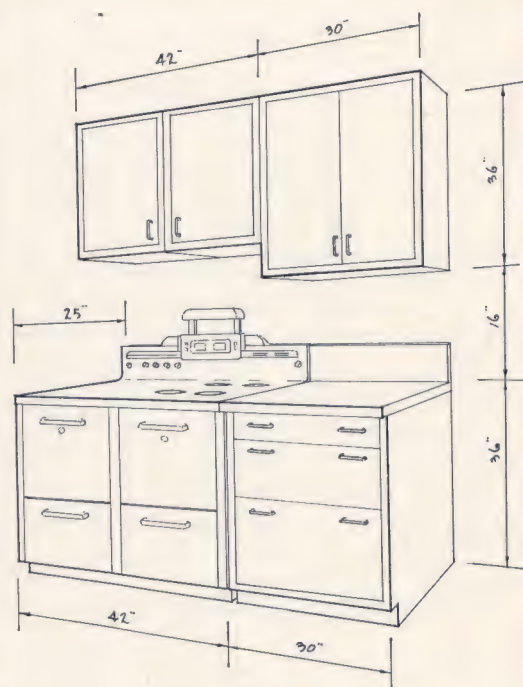
*Two Bedroom
Range and Serving Center*

RANGE AND SERVING CENTERS For 2, 3 and 4 Bedroom Residences

On this page are minimum sizes for two, three and four-bedroom residences. These three package groupings have been developed to give maximum storage space and increased efficiency at the range within the limits of the minimum amount of floor and wall space.



*Three Bedroom
Range and Serving Center*

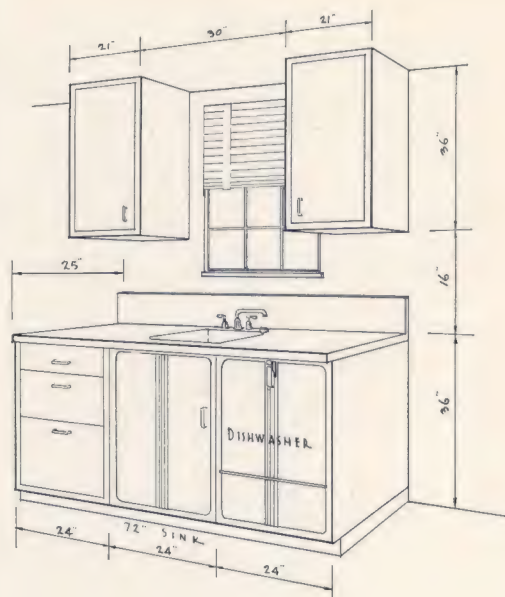


*Four Bedroom
Range and Serving Center*

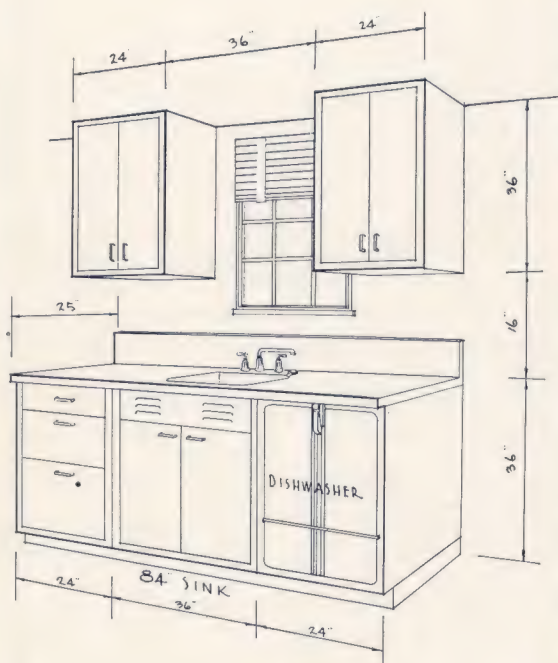
SINK AND DISHWASHER CENTERS

For 2, 3 and 4 Bedroom Residences

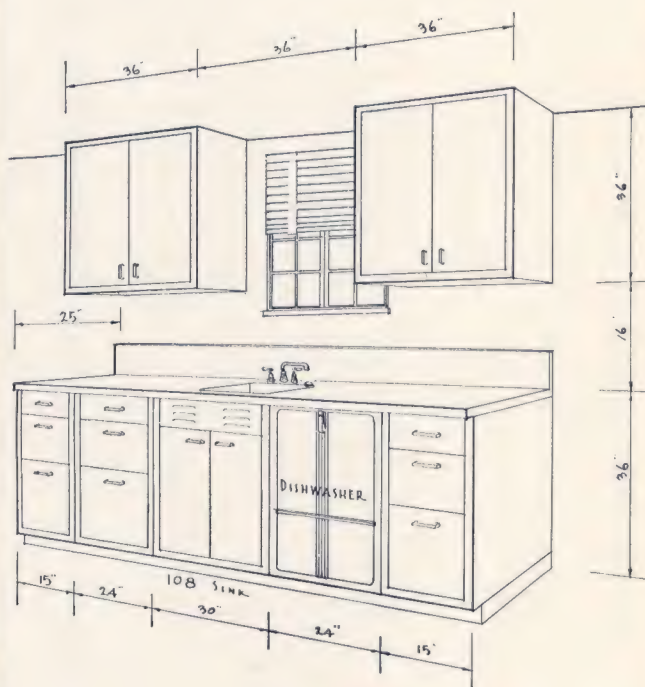
Diagrams show minimum requirements; all cabinets and work surfaces are standard. In the case of remodeling a present kitchen, it may be found that the larger Sink and Dishwasher Center can be installed economically, due to the width of the present room, giving additional storage beyond the minimum. This matter will be discussed in more detail in Chapter III, which deals with the use of these standards in actual construction cases.



*Two Bedroom
Sink and Dishwasher Center*



*Three Bedroom
Sink and Dishwasher Center*



*Four Bedroom
Sink and Dishwasher Center*

STANDARD KITCHEN PLANS

After careful study over a long period of time it has been found that certain kitchen *standard* arrangements can be used in a large percentage of present homes, and that these same standards can be of invaluable service to the architect, designer and builder in planning the kitchen area for new residences.

These standard plans have been designed carefully as to arrangement, balance of storage and practical use. You will find them efficient and a joy to their owner when installed. To the architect, designer or builder, they are definite guides that can be incorporated into residence plans in a minimum amount of time, as they solve the problem of just what is required in a kitchen. They are the result of over five years of extensive study of several thousand actual home kitchens. And they are designed to eliminate the guesswork from the planning of this important room.

The locations of window openings and door openings have been established on all of these drawings. The size of the window opening has been left as flexible as possible, the one governing factor being that where flat wall upper cabinets extend to the corner, there must be a minimum of 13" between the back of the window trim and the corner formed by the two walls. Where upper corner wall cabinets are indicated, this distance must be a minimum of 25" between the back of the window casing and the wall corner.

The matter of auxiliary dining facilities is important, as data collected during the last three years prove conclusively that the average home requires some place aside from the dining room where breakfast and midnight snacks can be served. These same data indicate also that, in a very high percentage of homes, 60% to 70% of the meals are eaten in the kitchen or in a break-

fast nook. You will note that the "U," "L" and Broken "L" Standard Kitchen Plans care for this important item.

These plans are drawn to scale of one quarter inch to the foot, in order to be of *practical* use to you.

One feature should be noted particularly in new residence construction: There should be a distance of 30" between the back of the casing of the dining room door and the outside corner of the kitchen. It is impossible to install equipment at right angles to a wall with such a door opening, where the distance is less than 25", as standard counter depths are of that dimension. The additional 5" insures better working conditions.

KITCHEN TYPES

The sketches on the following pages indicate standards for each of the seven types of kitchens for two, three and four-bedroom residences.

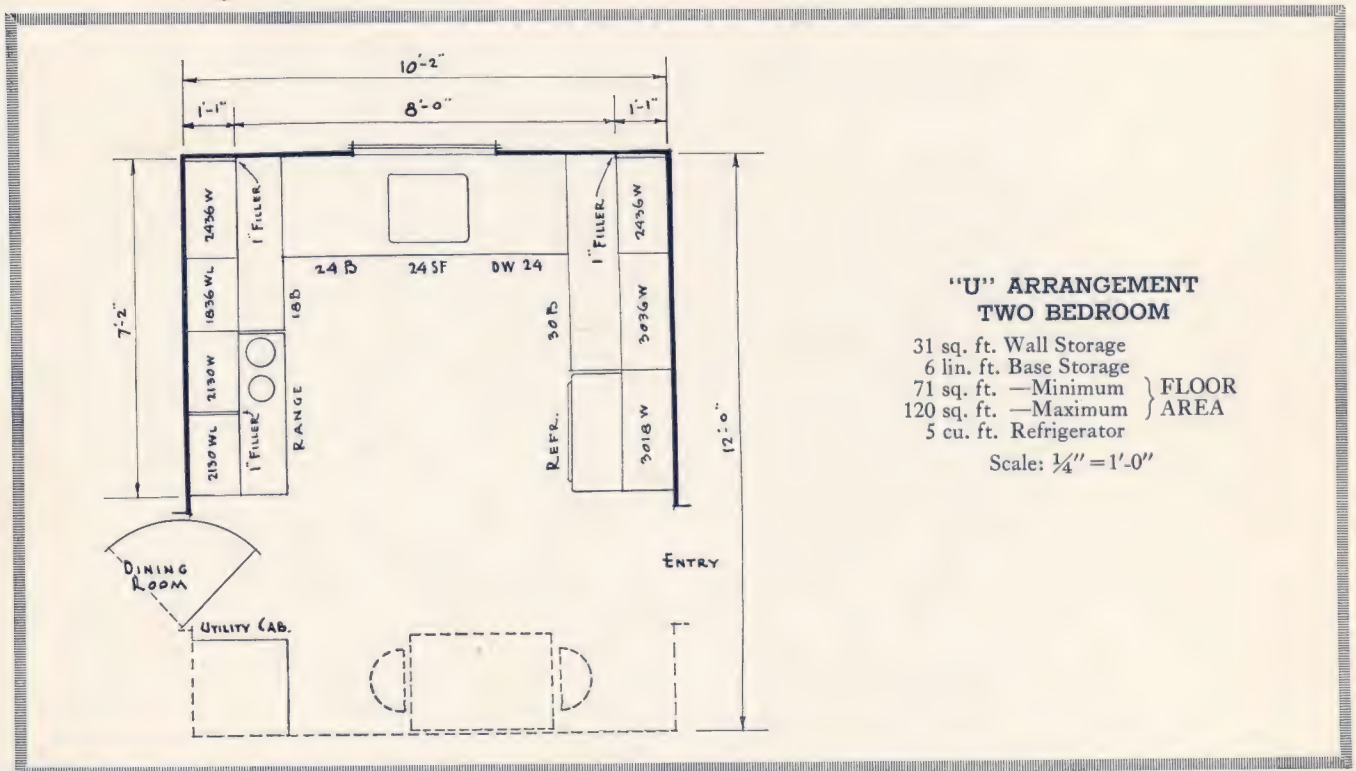
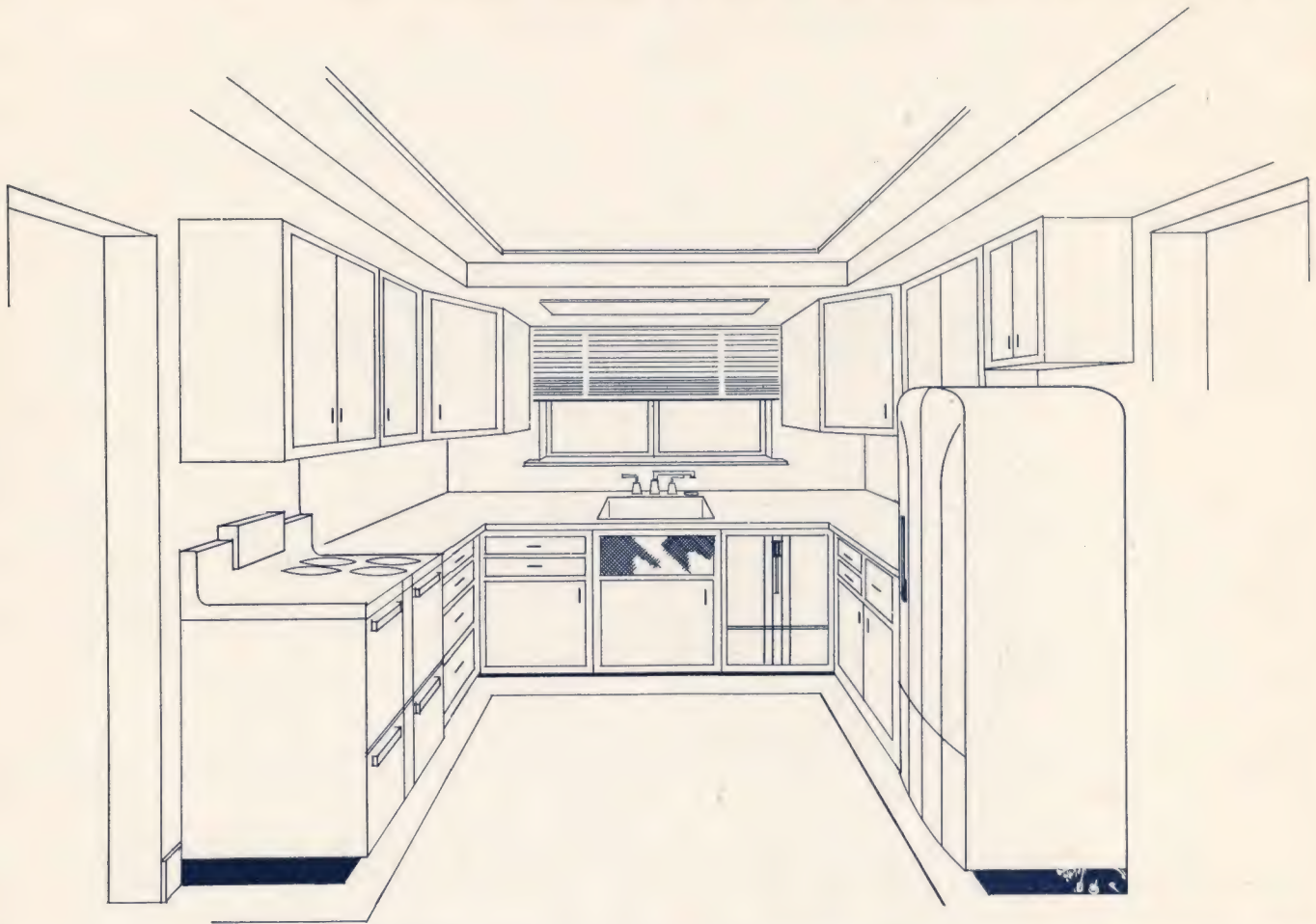
In the "U" Kitchens, "L" shaped, Broken "U" and Broken "L" groupings, the minimum of storage space for two or three *centers* in combination is below the minimum as indicated for the individual *center's*.

This has been done after a lengthy study and test, in order to conform as near as possible to reasonable floor areas for the kitchen, plus the important fact that when a *center* stands alone, it requires more space for one function than it would in combination with another *center*.

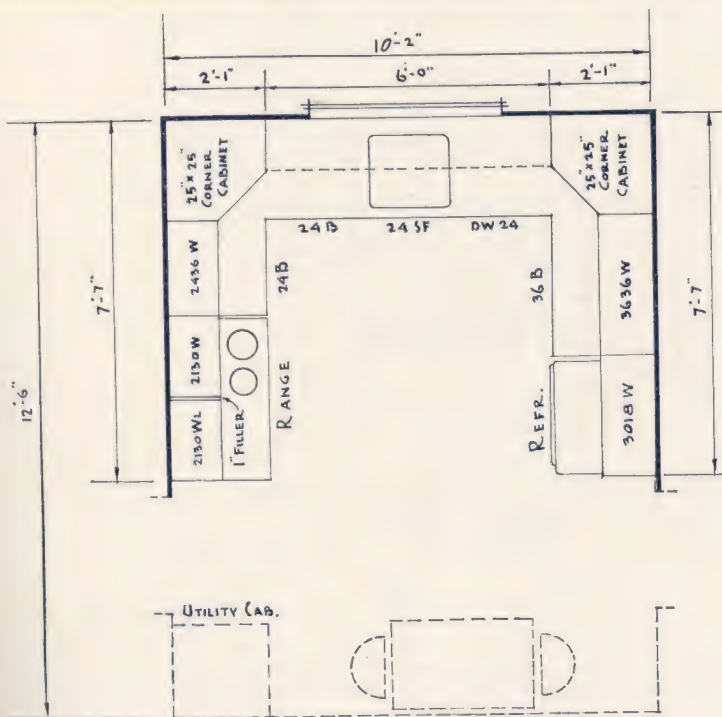
STANDARD KITCHEN TYPES

"U" Shaped Kitchens.....	16-17
Broken "U" Kitchens.....	18-19
"L" Shaped Kitchens.....	20-21
Broken "L" Kitchens.....	22-23
Individual Center Kitchens.....	24-25
Two Wall Kitchens.....	26-27
Straight Wall Kitchens.....	28

"U" SHAPED KITCHENS FOR 2,



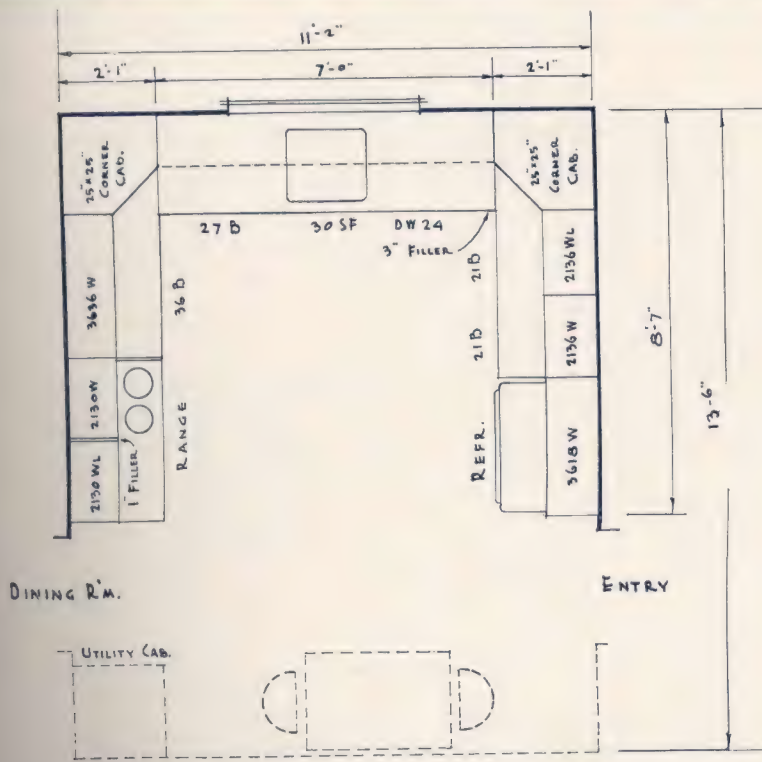
3 AND 4 BEDROOM RESIDENCES



**"U" ARRANGEMENT
THREE BEDROOM**

38 sq. ft. Wall Storage
7 lin. ft. Base Storage
75 sq. ft. —Minimum } FLOOR
125 sq. ft. —Maximum } AREA
6 cu. ft. Refrigerator

Scale: $\frac{1}{4}" = 1'-0"$

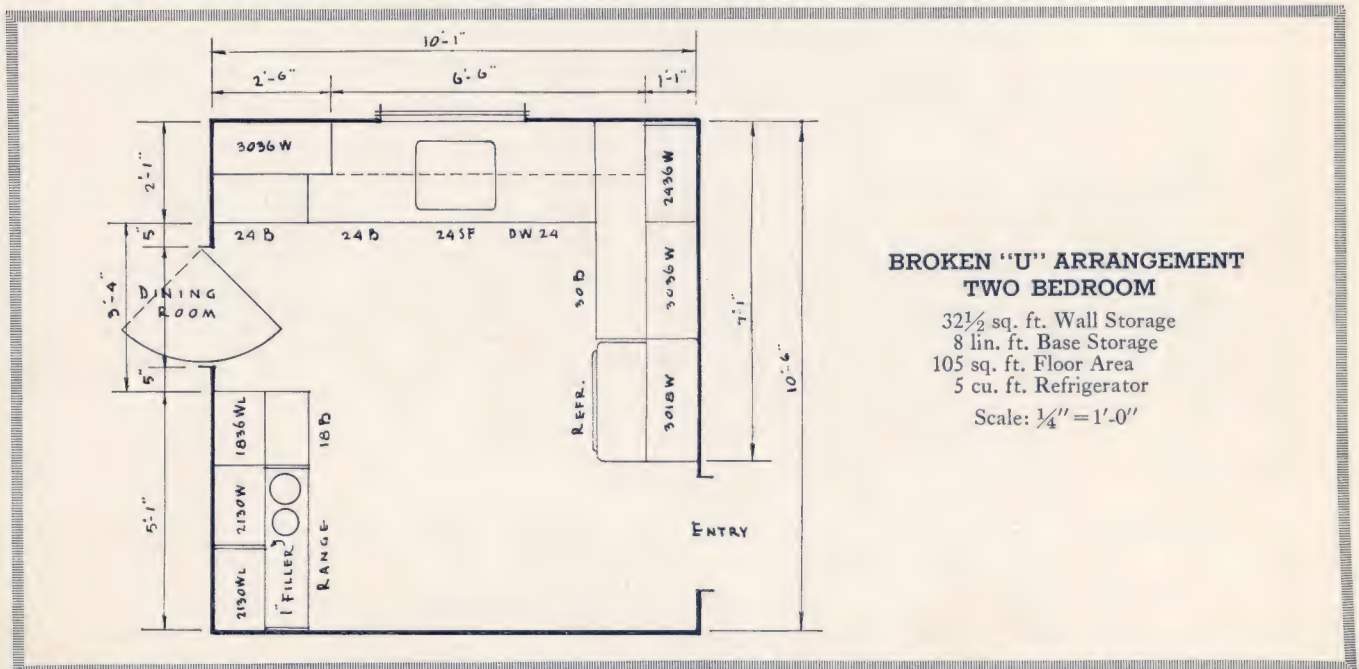
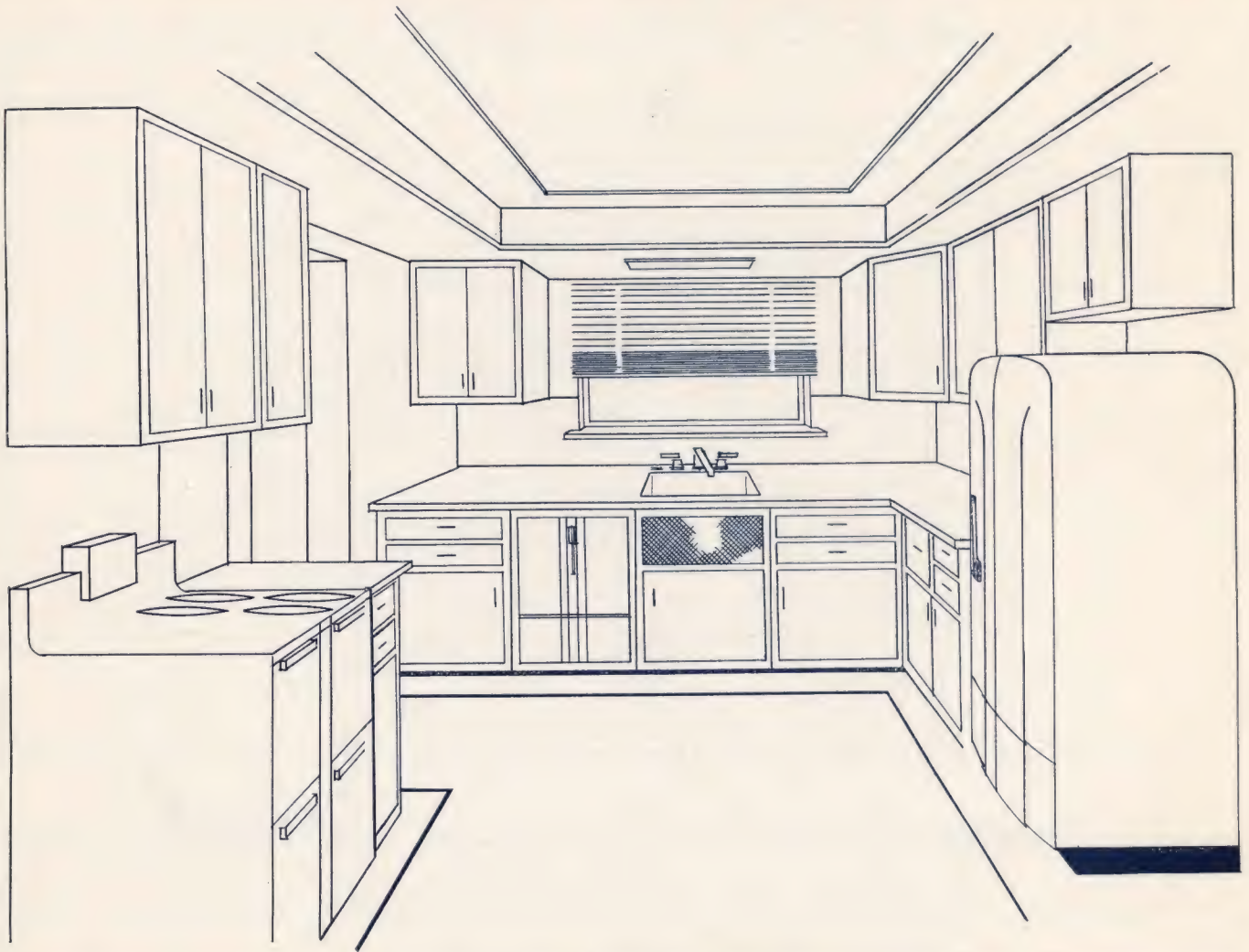


**"U" ARRANGEMENT
FOUR BEDROOM**

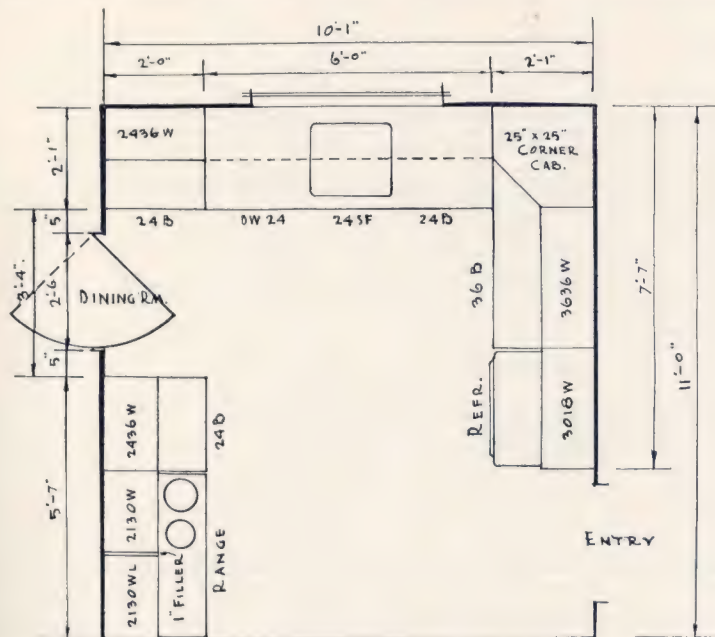
42½ sq. ft. Wall Storage
8¾ lin. ft. Base Storage
95 sq. ft. —Minimum } FLOOR
150 sq. ft. —Maximum } AREA
8 cu. ft. Refrigerator

Scale: ¼" = 1'-0"

BROKEN "U" SHAPED KITCHENS FOR

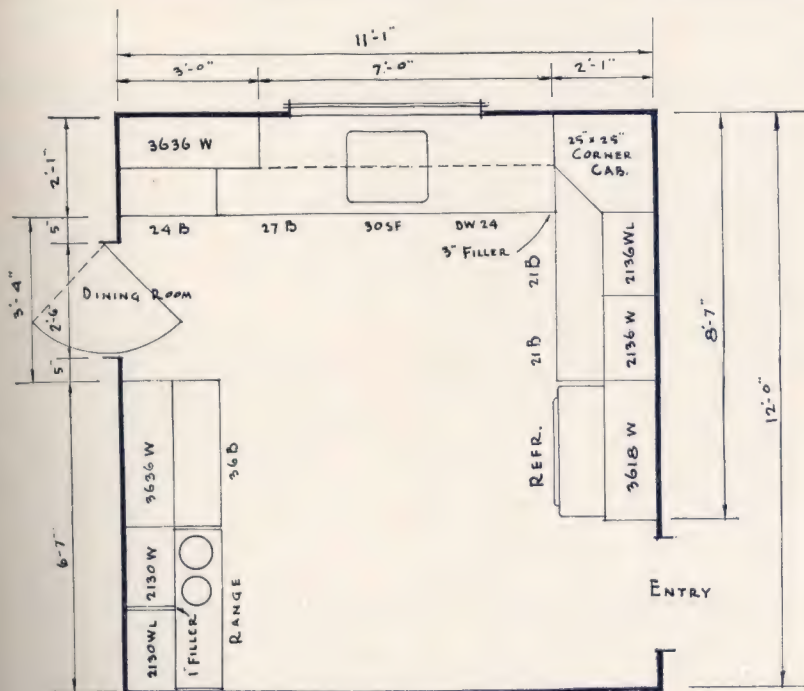


2, 3 AND 4 BEDROOM RESIDENCES



BROKEN "U" ARRANGEMENT THREE BEDROOM

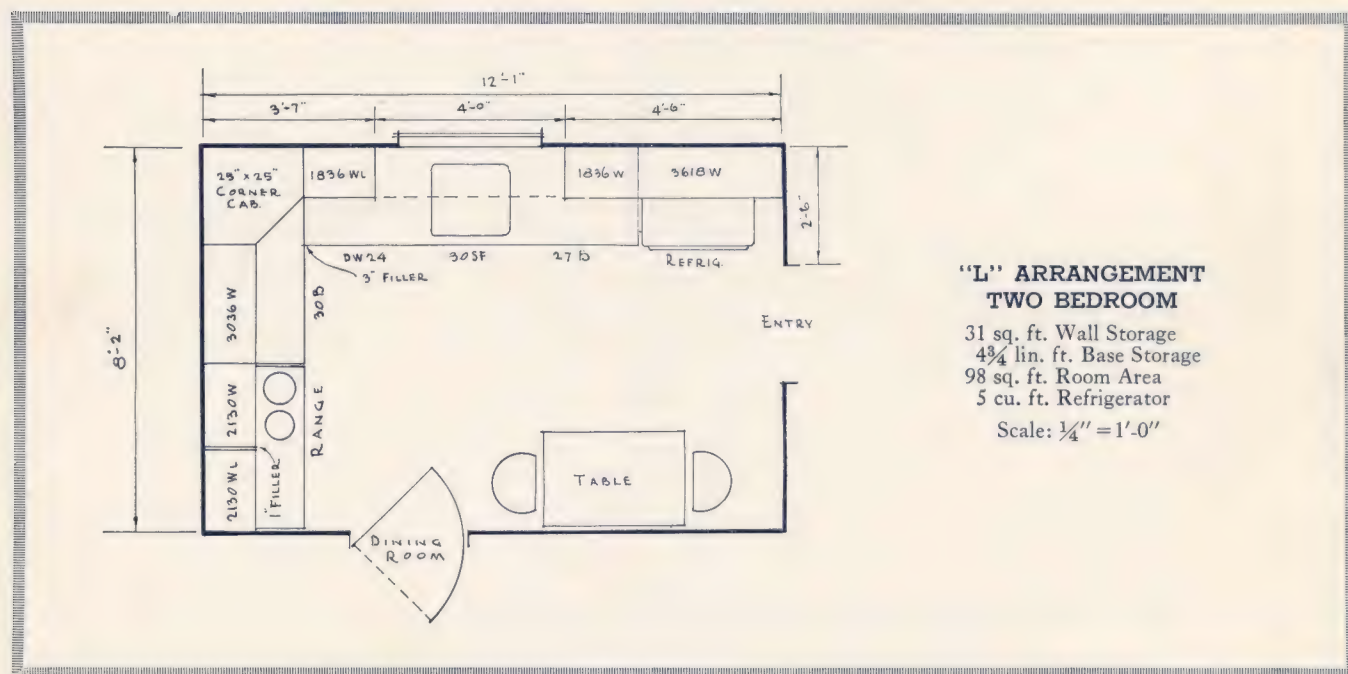
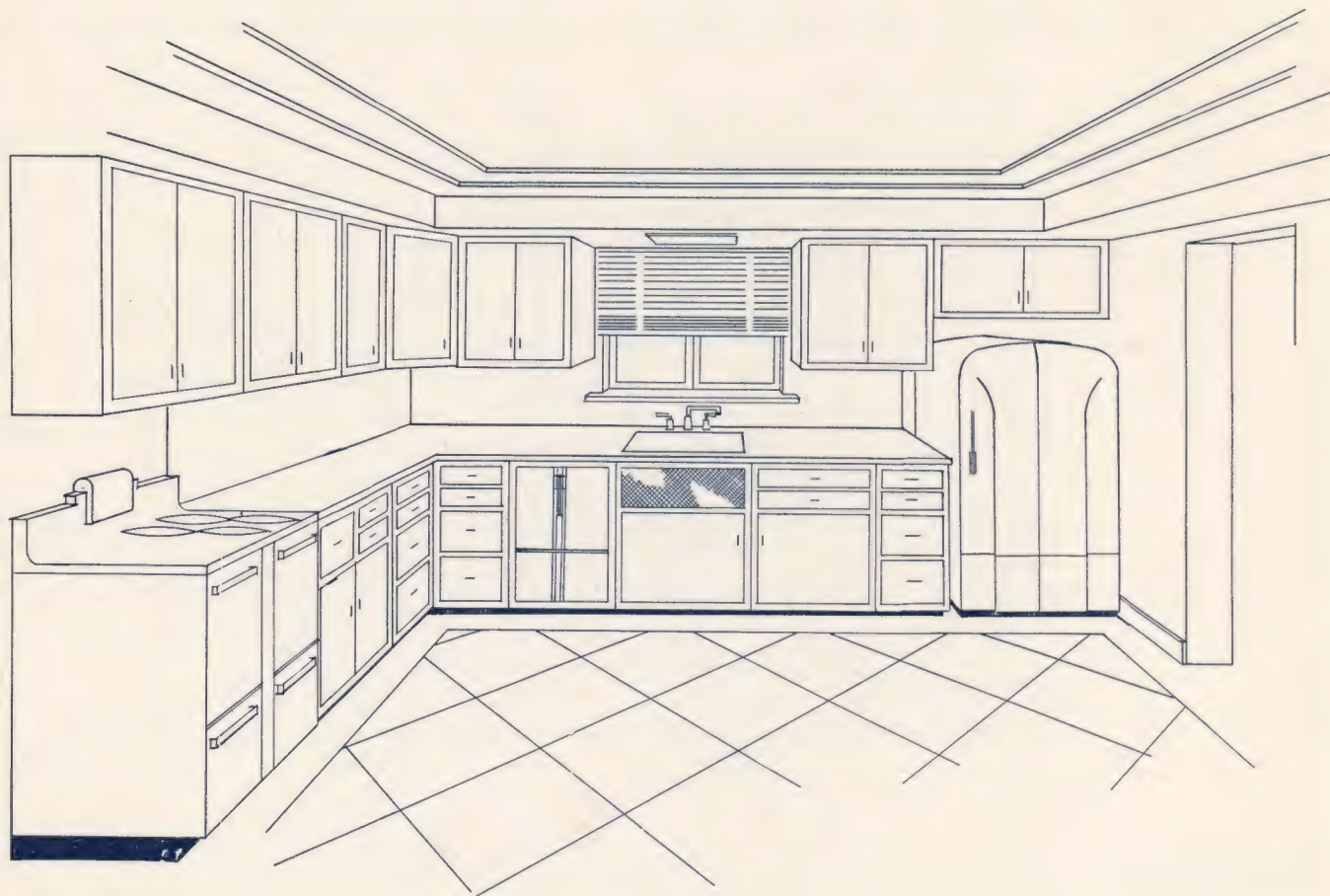
36 sq. ft. Wall Storage
9 lin. ft. Base Storage
115 sq. ft. Floor Area
6 cu. ft. Refrigerator
Scale: $\frac{1}{4}" = 1'-0"$



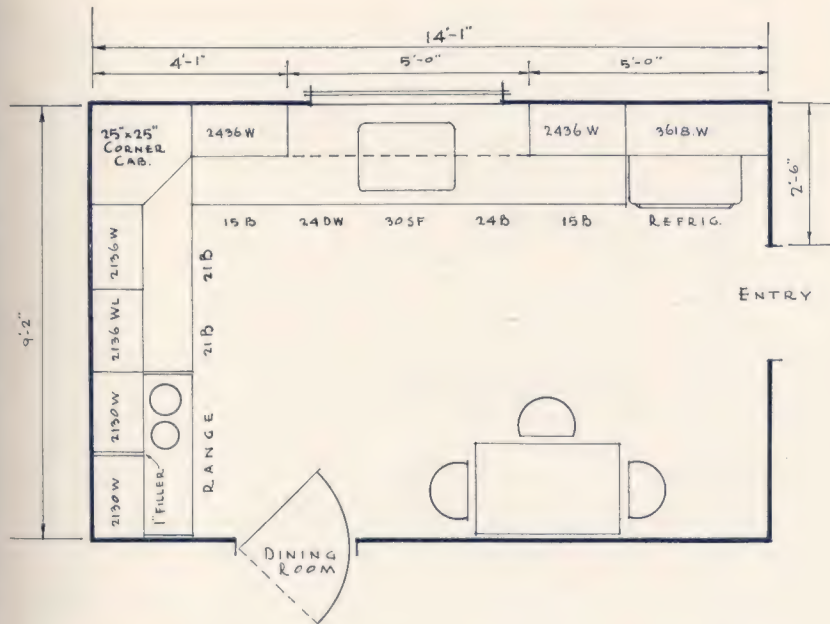
BROKEN "U" ARRANGEMENT FOUR BEDROOM

43½ sq. ft. Wall Area
10¾ lin. ft. Base Storage
132 sq. ft. Floor Area
8 cu. ft. Refrigerator
Scale: $\frac{1}{4}" = 1'-0"$

"L" SHAPED KITCHENS FOR 2,

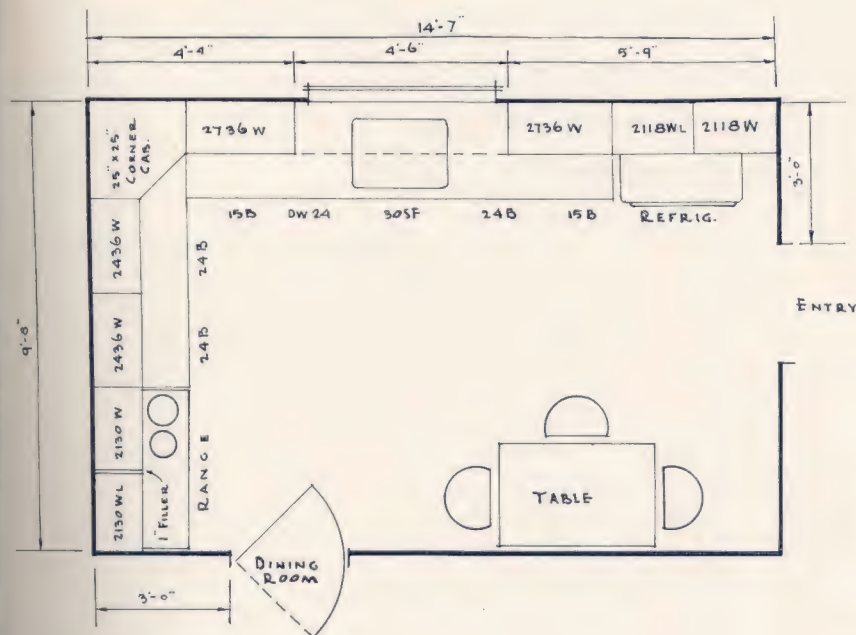


3 AND 4 BEDROOM RESIDENCES



"L" ARRANGEMENT THREE BEDROOM

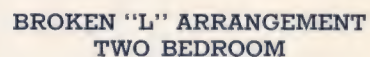
37½ sq. ft. Wall Storage
8 lin. ft. Base Storage
128 sq. ft. Room Area
6 cu. ft. Refrigerator
Scale: ¼" = 1'-0"



"L" ARRANGEMENT FOUR BEDROOM

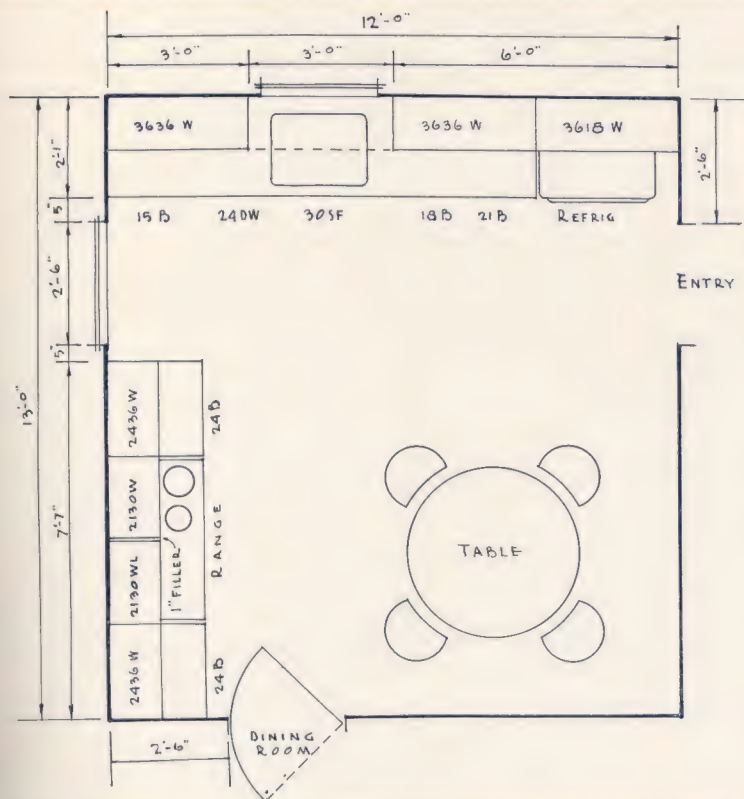
40½ sq. ft. Wall Storage
9½ lin. ft. Base Storage
140 sq. ft. Room Area
8 cu. ft. Refrigerator
Scale: ¼" = 1'-0"

A line drawing of a kitchen interior. The layout includes a central island with a sink and a window above it. To the left is a countertop with a cooktop. To the right is a refrigerator. The kitchen has various cabinets and drawers.



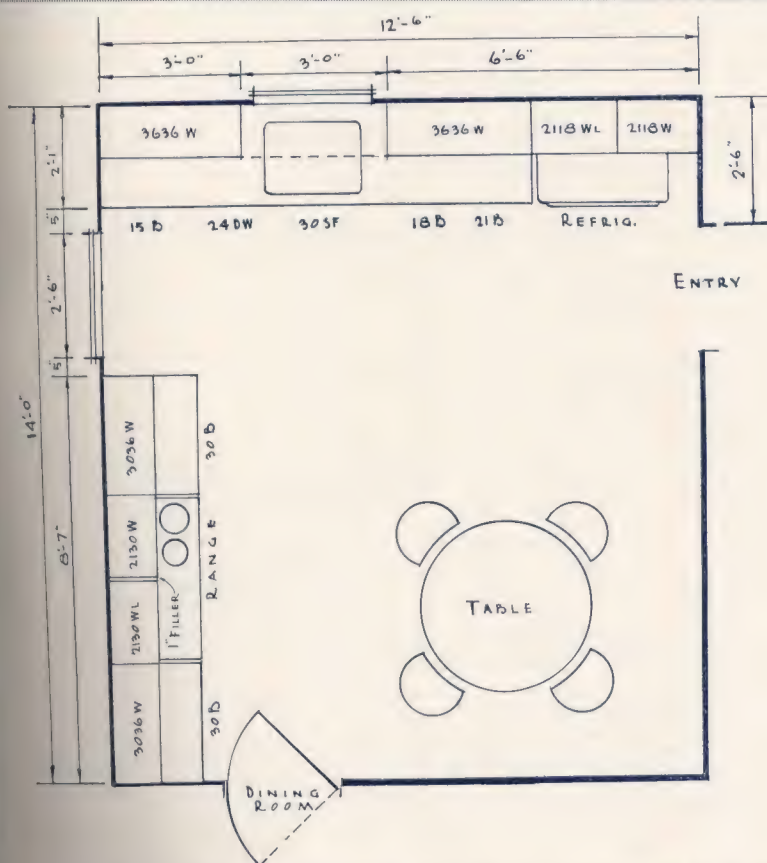
22

3 AND 4 BEDROOM RESIDENCES



BROKEN "L" ARRANGEMENT THREE BEDROOM

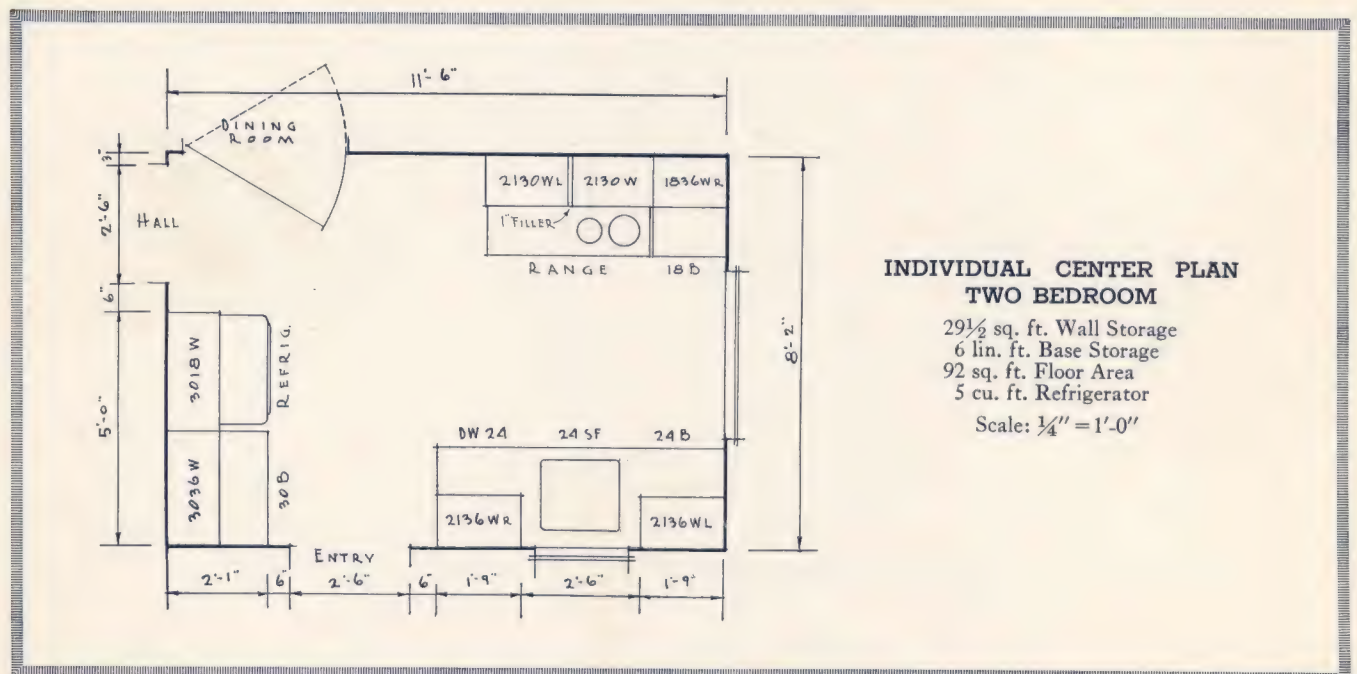
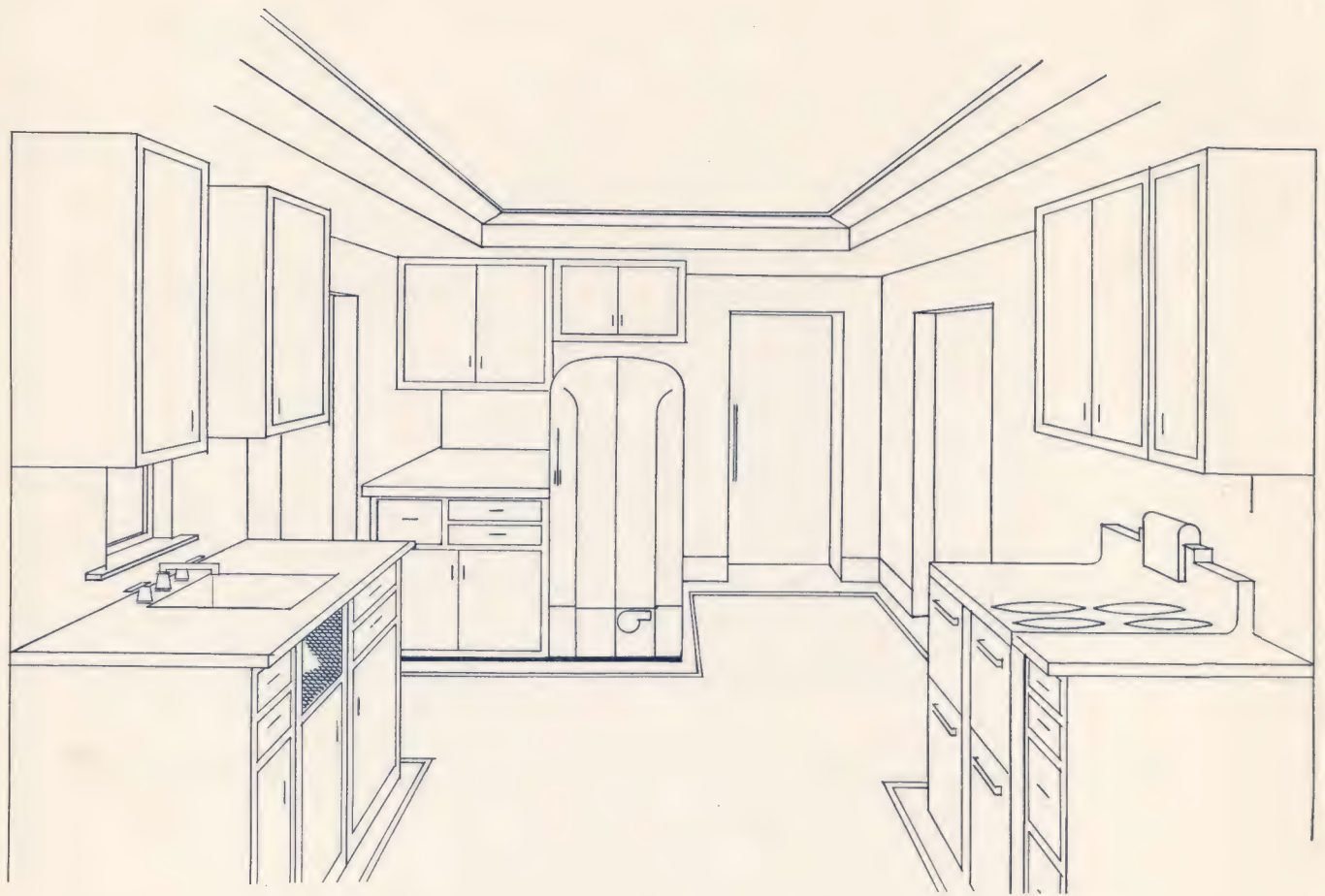
37 sq. ft. Wall Storage
8½ lin. ft. Base Storage
156 sq. ft. Room Area
6 cu. ft. Refrigerator
Scale: ¼" = 1'-0"



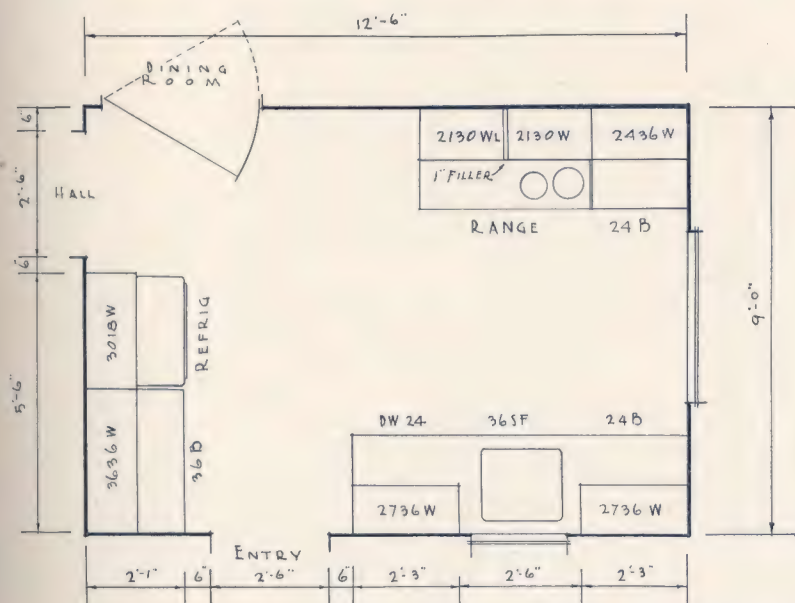
BROKEN "L" ARRANGEMENT FOUR BEDROOM

30 sq. ft. Wall Storage
9½ lin. ft. Base Storage
175 sq. ft. Floor Area
8 cu. ft. Refrigerator
Scale: ¼" = 1'-0"

INDIVIDUAL CENTER KITCHENS FOR

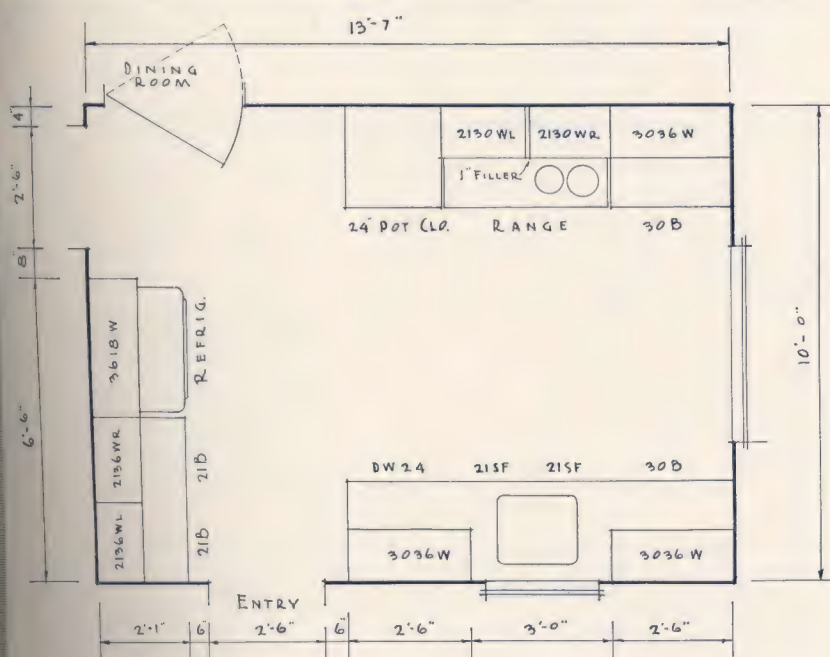


2, 3 AND 4 BEDROOM RESIDENCES



INDIVIDUAL CENTER PLAN THREE BEDROOM

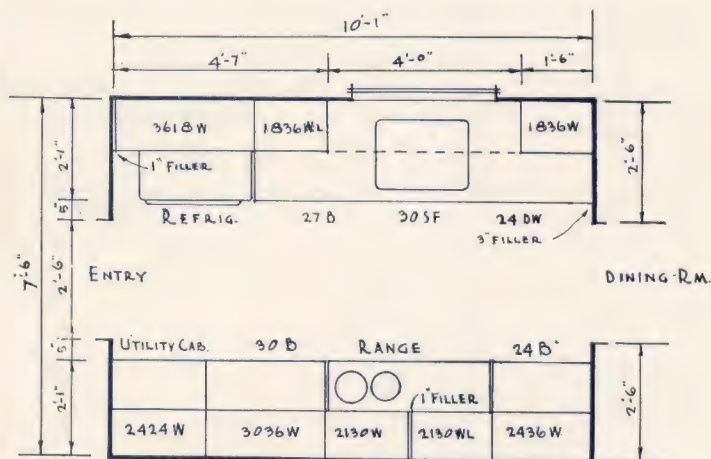
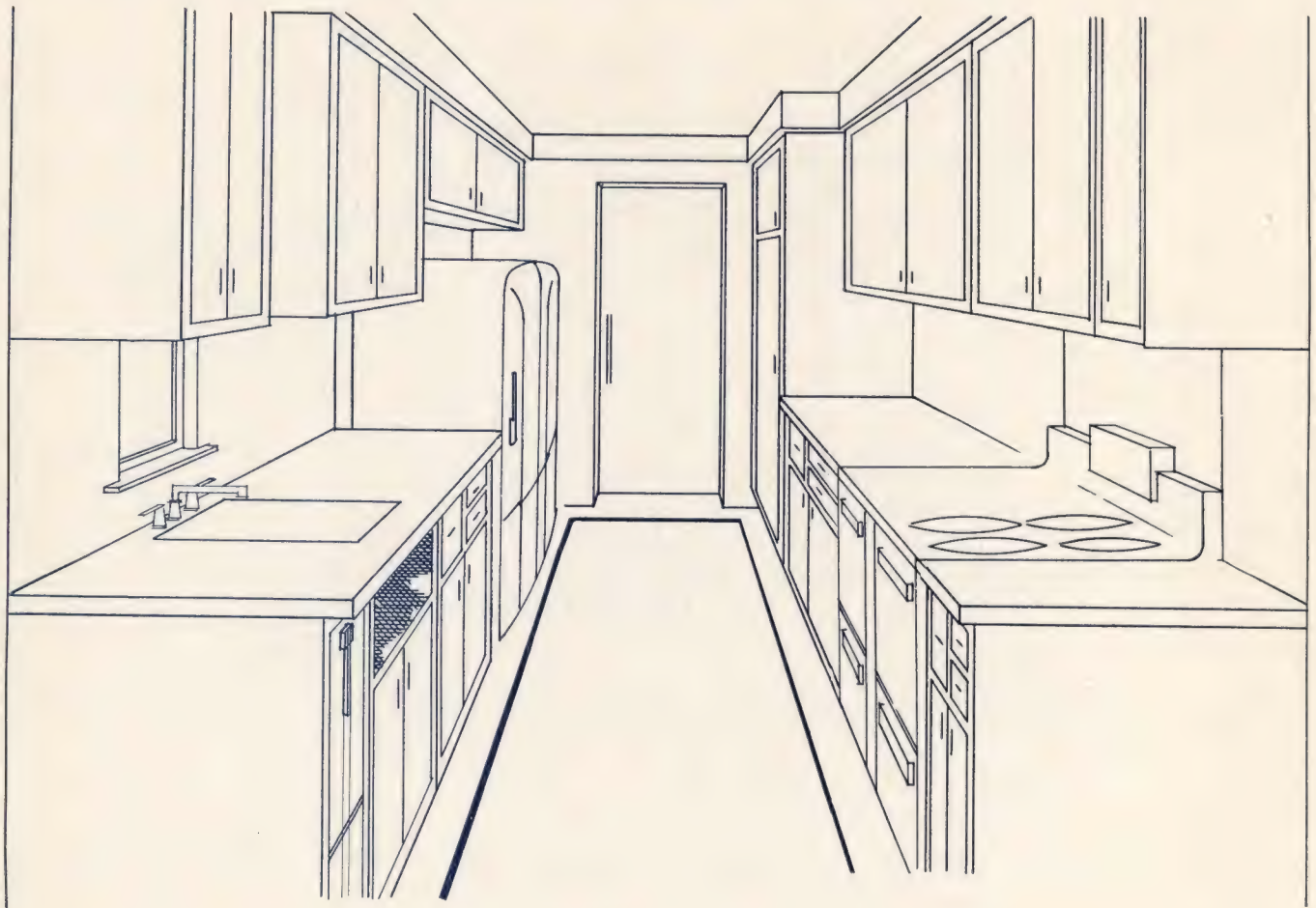
35½ sq. ft. Wall Storage
7 lin. ft. Base Storage
112 sq. ft. Floor Area
6 cu. ft. Refrigerator
Scale: ¼" = 1'-0"



INDIVIDUAL CENTER PLAN FOUR BEDROOM

42 sq. ft. Wall Storage
8½ lin. ft. Base Storage
135 sq. ft. Floor Area
8 cu. ft. Refrigerator
Scale: ¼" = 1'-0"

TWO WALL KITCHENS FOR 2, 3

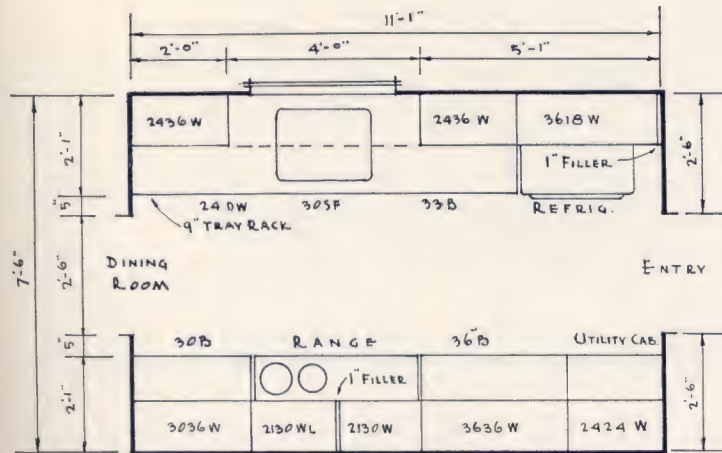


"TWO-WALL" ARRANGEMENT TWO BEDROOM

29½ sq. ft. Wall Storage
7 lin. ft. Base Storage
75 sq. ft. Room Area
5 cu. ft. Refrigerator

Scale: ¼" = 1'-0"

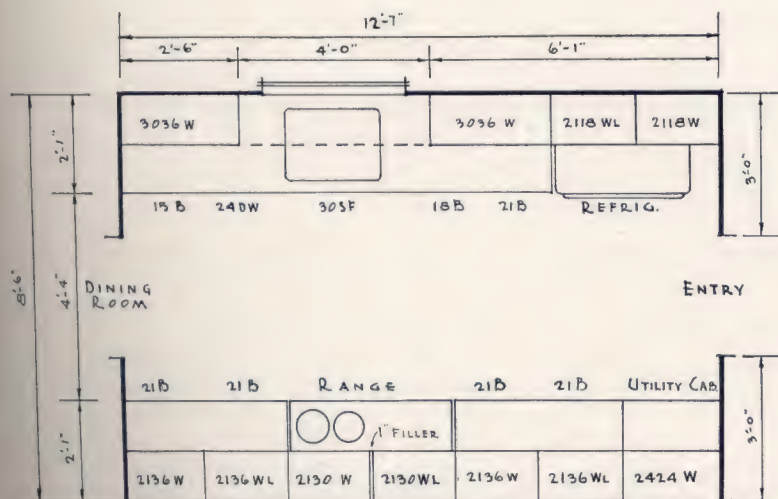
AND 4 BEDROOM RESIDENCES



"TWO-WALL" ARRANGEMENT THREE BEDROOM

35½ sq. ft. Wall Storage
8 lin. ft. Base Storage
82.5 sq. ft. Room Area
6 cu. ft. Refrigerator

Scale: ¼" = 1'-0"

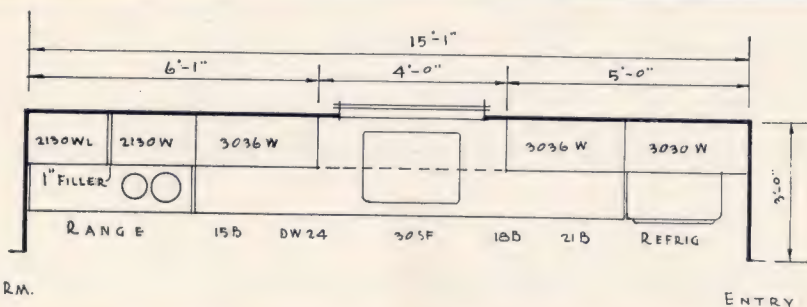
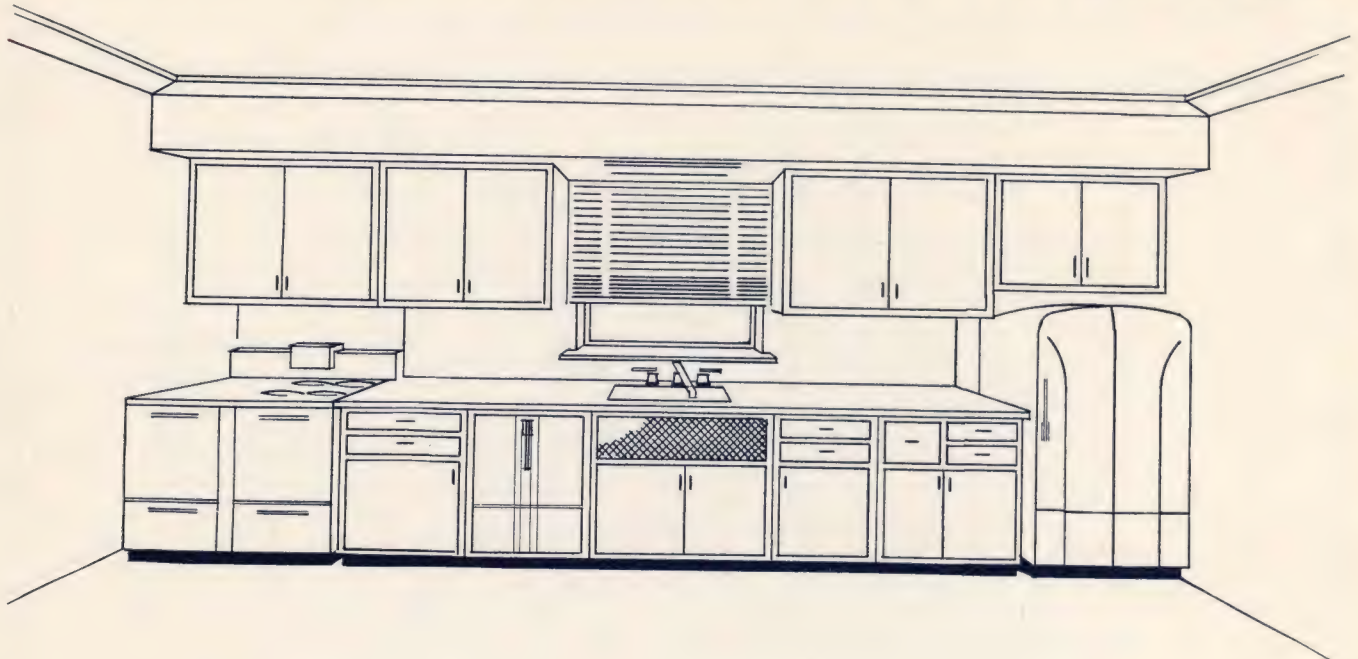


"TWO-WALL" ARRANGEMENT FOUR BEDROOM

43 sq. ft. Wall Storage
11½ lin. ft. Base Storage
128 sq. ft. Room Area
8 cu. ft. Refrigerator

Scale: ¼" = 1'-0"

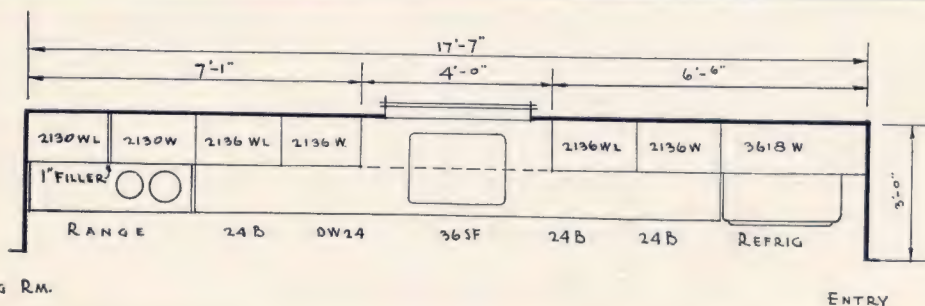
STRAIGHT WALL KITCHENS FOR 1 AND 2 BEDROOM RESIDENCES



"STRAIGHT WALL" ARRANGEMENT ONE BEDROOM

22 sq. ft. Wall Storage
4½ lin. ft. Base Storage
4 cu. ft. Refrigerator

Scale: ¼" = 1'-0"



"STRAIGHT WALL" ARRANGEMENT TWO BEDROOM

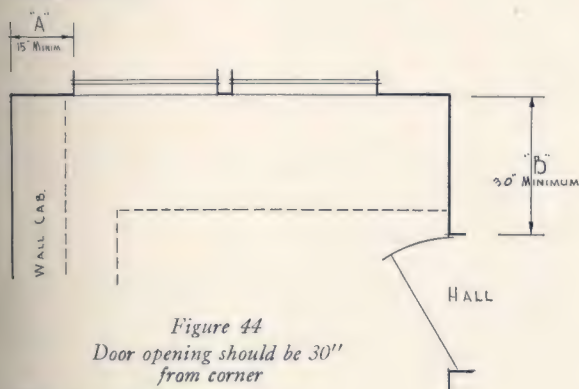
28 sq. ft. Wall Storage
6 lin. ft. Base Storage
5 cu. ft. Refrigerator

Scale: ¼" = 1'-0"

NEW BUILDING KITCHEN SUGGESTIONS

New residence kitchen design offers many opportunities for structural and monetary economics with increased efficiency and satisfaction to the occupying homemaker.

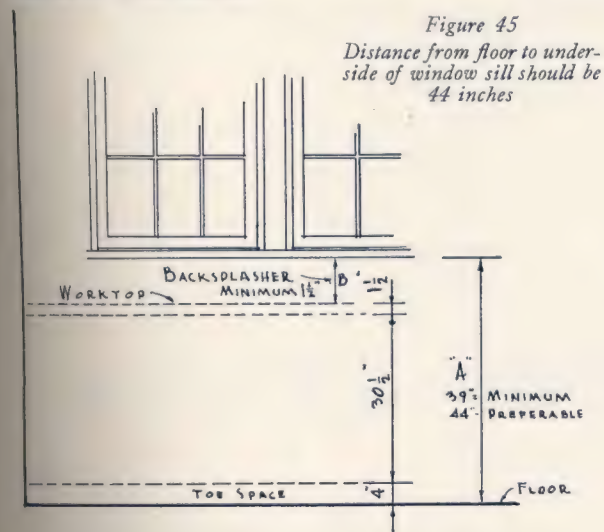
Careful attention should be given to the location of doors and windows in relation to corners. Major equipment is from 24" to 28" in depth. Therefore, a door opening should always be 30" from the corner. (See figure 44). Likewise, the distance between a window opening and a corner should be a minimum of 15". Standard flat wall cabinets are 13" in depth. The minimum of 15" permits the installation of flat wall cabinets to the corner. Where corner wall cabinets are to be used or considered, this distance should be increased to 27".



Window Heights

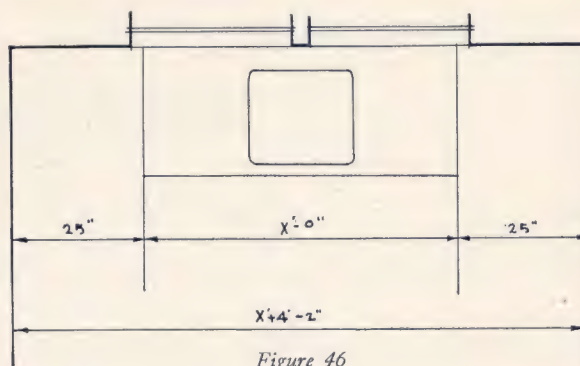
Base cabinets with work surfaces are 36" high. Backsplashes vary from 1½" up to 8". Therefore, distance from floor to underside of window sill should be 44". (See figure 45).

The use of these simple fundamental standards insures the maximum use of floor and wall space for equipment, cabinets and work surfaces of standard dimensions.

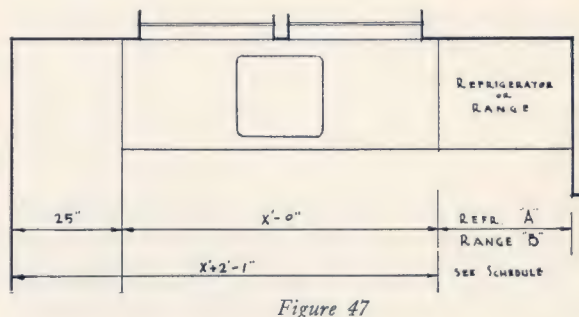


Room Dimensions

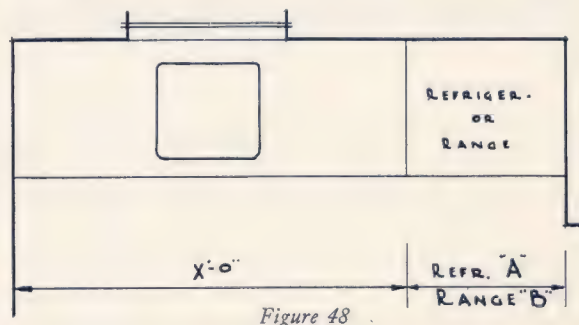
The location of partitions will have a definite saving in cost of work surfaces and sinks. Standard work surfaces are 25" wide. To assure this uniform counter width of 25" on both sides, as well as on the end, the width of the "U" shape kitchen should be an even number of feet *plus two inches*. (See figure 46).



Because only one side of "L" shape or Broken "U" kitchens has counter space adjacent to end of kitchen, the over-all width of kitchen should be an even number of feet *plus one inch* (see figure 47).



Broken "L," Two-Wall and Straight Wall kitchens should be even feet in dimension for the sink, plus the width of the range or refrigerator. (See figure 48). The application of this principle permits the use of standard length sinks which are made in even feet. Even feet also eliminate fillers in the cabinet schedules.



CHAPTER III

INSTALLATION DATA

Checking Corners

One of the first steps in kitchen installation is to check the corners of the room to see if they are square. As a rule, in residences already built, slight variations are apparent. Many of these can be eliminated with very slight scraping of plaster, or filling in with plaster to smooth up the wall. (Figure 49.) Instances will be found, however, where the rooms are badly out of square. In "U" or "L" kitchens with legs at least four



Figure 49

feet long, and a continuous one-piece work surface, it will be necessary to use a cap-strip at the top of the backsplash to close the misalignment. If individual work surfaces for each center are used with the surface seal corner strip to close and seal the joints between—the counters can be opened a sufficient amount at either the front or

back, as the case warrants, to care for the irregularities in the angle of the wall.

Checking the Floor

The next step is checking the floor to determine whether or not it is level. This is quite essential, as work surfaces must be absolutely level in order to prevent water from settling in low spots. If the floor is only less than an inch out of level, place shims under the bottom of the base cabinets.

In rare cases where the variation is great, it may be necessary to level up the entire floored surface. This is done by placing a new subfloor above the original. It is necessary to do this in extreme cases because variances greater than one inch, place a part of the work surfaces more than 37" from the floor, which is too high for the average homemaker to work at conveniently.

Checking Walls

Walls that are out of plumb affect only the upper wall cabinets. These can be plumbed up easily by shimming out either the top or the bottom of the wall cabinets at the time of installation.

Should structural changes be necessary, such as moving doors or windows, this should be done before actual installation work begins.

ASSOCIATED EQUIPMENT AND MATERIALS

Cabinets

Kitchen cabinets are manufactured of both steel and wood. All-steel cabinets are made in

units, shipped completely finished. Many improvements have been made in cabinets of this material to make them quieter, more efficient, and of better appearance. The steel cabinet is a good investment.

Wood cabinets are of two types, the manufactured unit type and the millwork cabinet.

The former type is available both completely finished and unfinished. The finished unit is generally better, built of hardwood, properly kiln-dried. Painting at the factory seals them against moisture to a great degree. An added advantage is that the finish is sprayed on, which gives a finer, better appearing surface than paint applied with a brush. It is also found much easier to keep clean as the spray finish is smoother and has fewer and smaller pores in which dust and dirt may lodge. The unfinished cabinet is much lower in first cost, but when properly finished and equipped with hardware, very little is saved.

Millwork cabinets may be the very cheapest or the very best, depending entirely on the quality of both material and workmanship. Their serviceability depends entirely on the skill and care of the builder but they are usually crude in design and construction. High grade millwork is usually as expensive or even more so than is the best grade manufactured cabinet when hardware and finish are added. Many architects still use this type because they believe it is better to plan the kitchen interior after the home is erected and plastered. There is a growing tendency, however, to use manufactured units, as the advantages of standard size, better finish, more efficient design

and interior fittings, such as flour and sugar bins and pastry drawers, are now more appreciated. Of equal importance, utensils and staples in packages are becoming standard in dimensions, thus making the use of standard size storage units both practical and desirable.

Base Cabinets

Base cabinets are of two types, the drawer type and the cupboard type. These are illustrated in Figures 50, 51, and 52 below.

Both have their advantages. Both are in general use. Drawer storage can be used for cupboard storage, but cupboard space cannot conveniently replace drawer storage for gadgets, small utensils, or linen.

Base Cabinets are $30\frac{1}{2}$ " high and 24" deep and are placed on a toe space 4" high, which, with a counter $1\frac{1}{2}$ " in thickness, makes 36" from floor to top of counter.

Most manufacturers' base cabinets are shipped with a toe space or subbases, either of wood or steel. In cases where base cabinets are not furnished with toe space—or where the floor is very uneven—wood subbases can easily be installed. To do this place a strip of wood 4 inches high, and of any convenient thickness, at the back of the cabinet. Run a similar strip parallel to it, three inches in from the front face of the cabinet. Secure these strips to the floor; then place the cabinets directly upon them. These dimensions have been established as the most satisfactory toe space of 4" in height by 3" in depth.

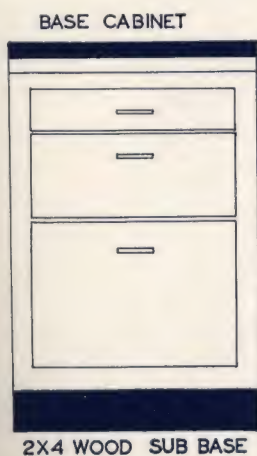


Figure 50

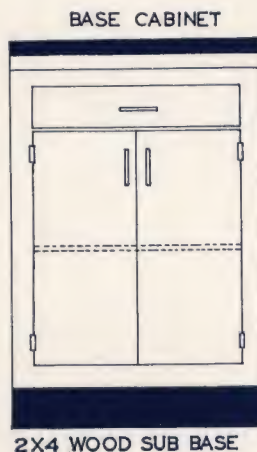


Figure 51

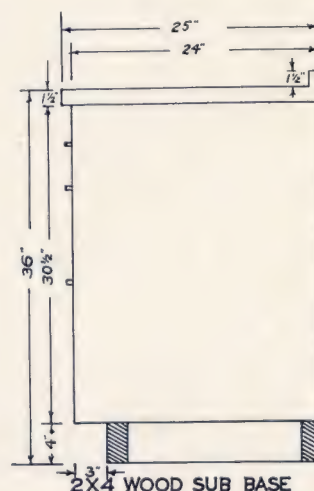
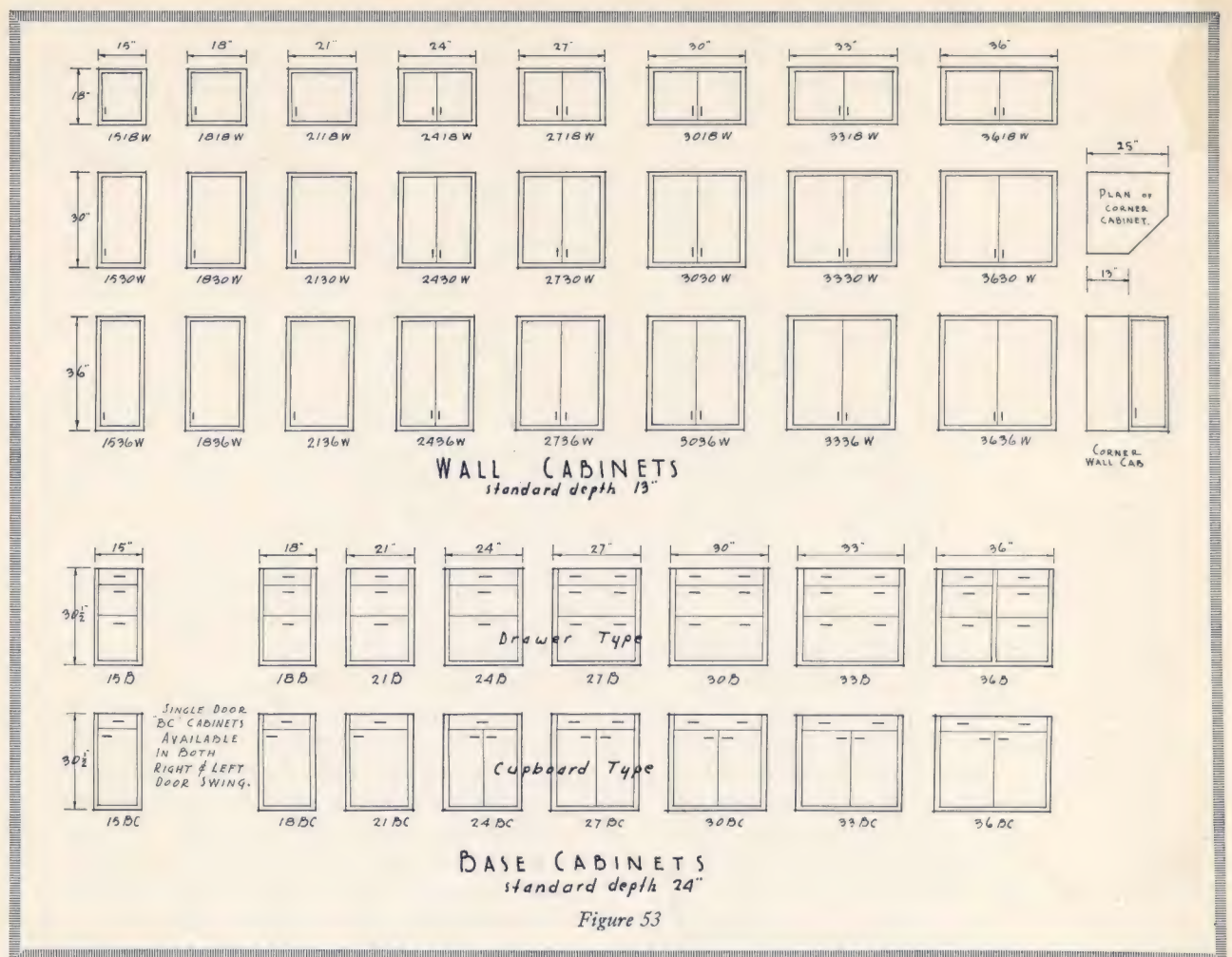


Figure 52



Wall Cabinets

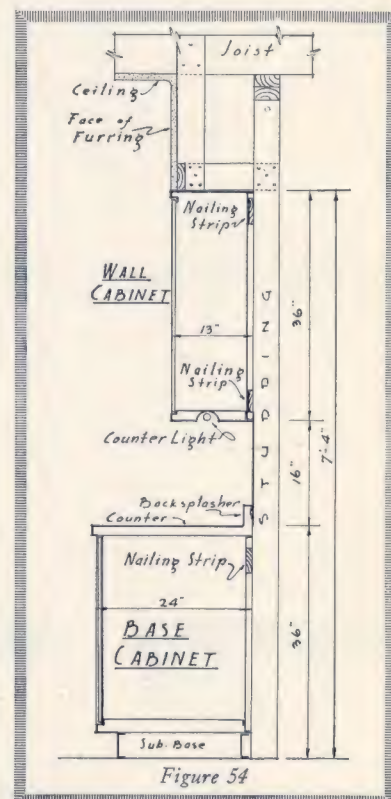
Wall cabinets are also of two types—open and closed. The open-front cabinet is preferred by women who like to display colored china or pottery. The closed type is most popular because the doors protect the contents from dust and because the closed doors add to the orderly appearance of the kitchen. The latter are very often used in conjunction with one or two of the former type in which interesting pieces of china and bric-a-brac can be displayed to add color and atmosphere to the room.

The usual method of installing wall cabinets is to secure them to the studding by means of long screws. Enough screws should be used to insure complete rigidity.

Wall cabinets are available in a variety of heights and widths. The standard heights are 18", 24", 30" and 36". Standard widths are 15", 18", 21", 24", 27", 30", 33" and 36".

Standard Sizes

Figure No. 53 indicates the standard sizes of both base and wall cabinets. And these standard sizes are available in both wood and steel cabinets.



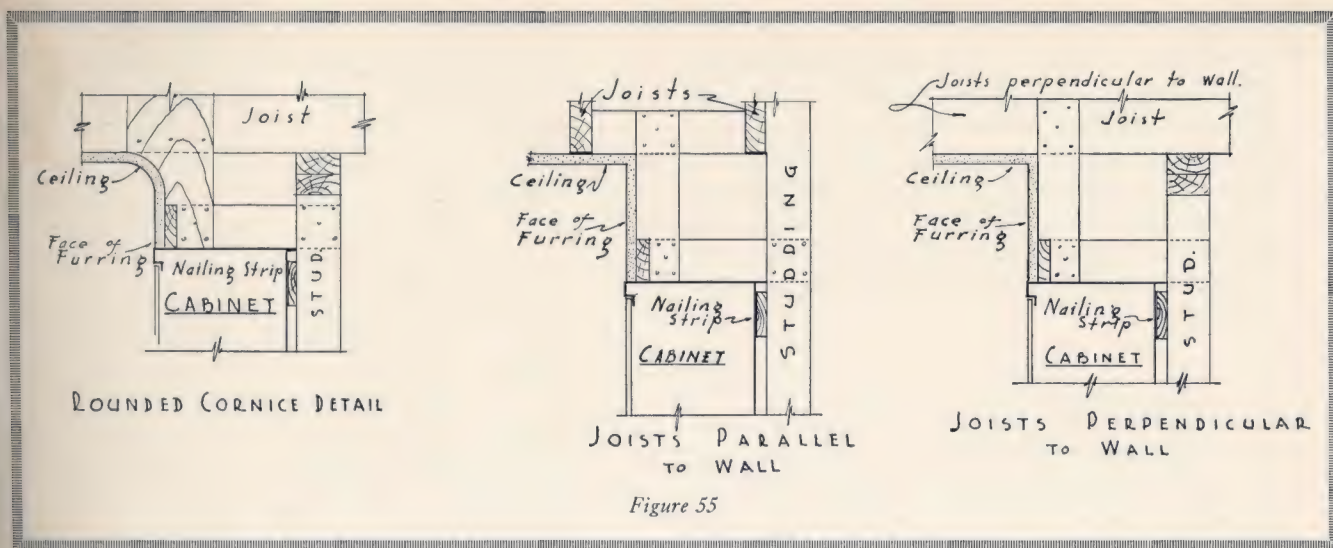


Figure 55

Sections of Installation

Figure No. 54 shows a typical system of cabinet installation.

On the wall sections, standard practice provides 16" between the work surface and the upper cabinets. This is particularly true where wall cabinets are 36" high. Where 30" wall cabinets are used, this distance is sometimes increased to as much as 1'-8". Of course, this change would vary the over-all height to the top of the upper cabinets.

Two points should be definitely considered, in establishing this height. (1) If the upper cabinets are too close to the work surface, the homemaker will feel cramped and crowded while engaged in food preparation. (2) It requires from 14" to 18" for food mixers—the average being 16" in height. From 14" to 20" between the work surface and the underside of the wall cabinet, has been established as satisfactory height. Increases beyond 20" are unsatisfactory from the homemaker's standpoint; for every inch the wall cabinets are raised increases the distance she has to reach to the shelves. If cabinets are more than 20" above the work surface, the average homemaker cannot reach beyond the first two shelves.

Wall cabinets higher than 36" have little value. It is better to have a greater amount of lower shelves, if possible, rather than increase the height of the cabinet and add shelves in that direction. For this reason most manufacturers establish 36" as maximum height of standard wall cabinets. The use of a standard height base and work surface of 36", plus 16" between it and the wall cabinet plus 36" high wall cabinet, makes an over-all height of 88" or 7'4". The top shelf is then 6'4" from the floor.

Standard cabinets will not reach the ceiling of the average home. This open space should be furred down to eliminate a definite dust trap, make cleaning problems easier, and enhance the general appearance of the kitchen. Figure 55 shows three approved methods of furring down from the ceiling to meet the top of the cabinets.

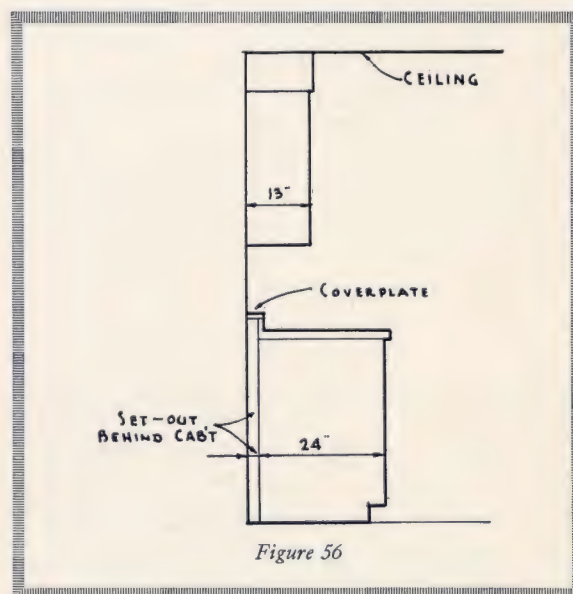


Figure 56

Standard Units in Odd-Width Rooms

To install a work surface in an odd-width kitchen that extends from wall to wall used to be a costly item—due to the use of special-length work surfaces and sink. A method of installation, however, has been developed which permits the use of a standard-length even foot work surface and sink top. Figure 56 indicates clearly how this is done.

Choose a size of sink and work surface as near as possible in foot length to room requirements. If the room is "U" shaped, deduct 4 feet and 2 inches from the total width to care for the counter widths of the two legs. Then select the largest even foot length for the sink section that will go into the remainder. The final remainder will be less than 10 inches. Set the base cabinets out from wall on each leg, half of the remaining total. See Figure 57.

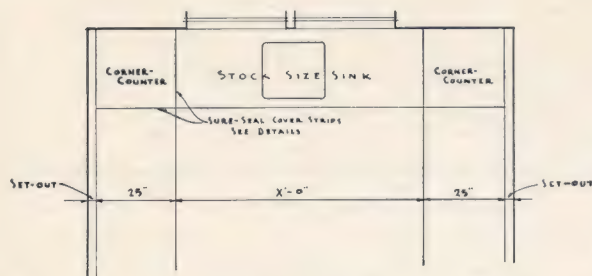


Figure 57

Example "U" Shaped Kitchen

14'-6" width of room

4'-2" width of leg work surfaces

10'-4" length of remaining width wall-to-wall counter

10'-0" largest even foot length for sink section

4" total remainder

2" distance base cabinets are set out from wall on each leg

A cap strip is used at top of work surface backsplash and on exposed ends to close the opening. This can be a very definite advantage by using a cap strip at the top of a backsplash of a counter to form an ideal condiment shelf.

In "L" shaped kitchens, the procedure is identically the same, with the exception that you only have to consider the 2'-1" width of one counter, and the total distance of the set-out is the total remaining on one side of the room.

This method of installation should only have to be resorted to in homes already erected. The matter of proper widths of rooms for new kitchens has been discussed in a previous chapter.

Work Surfaces

Work surfaces may be of wood, MICARTA, linoleum, tile, Monel, stainless steel, Prestwood. Each of these materials has its advantage, either from the standpoint of cost or effectiveness. Flat rimmed sinks may be installed in conjunction with any of these materials, to combine the work surface and sink into one integral part.

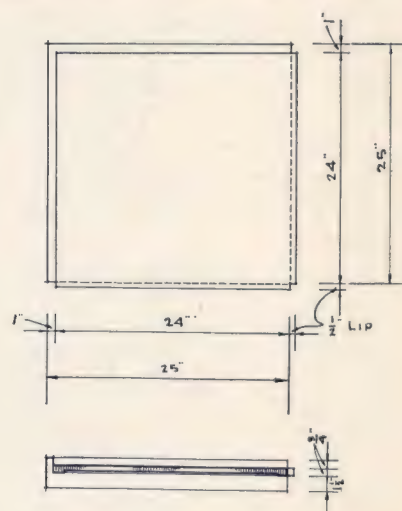
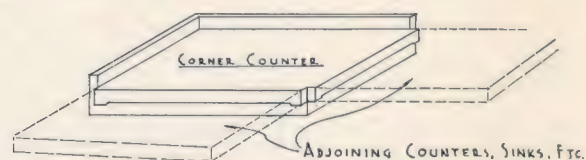
Wood and Prestwood counters are the most inexpensive. Linoleum and tile are of a slightly

higher cost, but have the advantage of being less absorbent of liquids and sink acids.

MICARTA, Monel and stainless steel are slightly more expensive, but are well worth the difference in investment, due to their durability and appearance. These three materials insure long years of satisfactory service.

Corner Counters

The use of corner counters in "U" and "L" kitchens is often advisable because standard-length units can be used as work surfaces in both legs. Another advantage is that the cover strip conceals adjustments of variations caused by the walls not being at right angles to each other. (See figure 58).



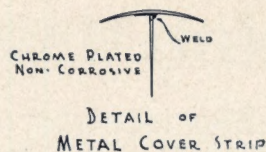
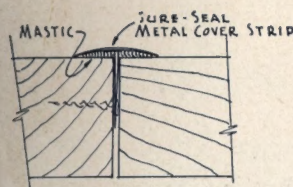
DETAIL OF CORNER COUNTER

Figure 58

Sure Seal Cover Strip

This cover strip makes a sure seal between work surface tops of either like or unlike materials; has a knife edge and a very slight radius. (See Figure 59 for design.)

An absolutely tight seal is insured by fastening it securely with screws on one of the outer vertical edges of work surface with a small amount of mastic placed underneath. If pressure is used in making this attachment, the free edge has a tendency to roll down slightly. This guarantees a tight joint against the other counter, when the two are placed together and the work surfaces tightened down to base cabinets.



DETAILED SECTION
OF SEALED COUNTER JOINT

Figure 59
Sure seal cover strip

Floor Coverings

Floor coverings for kitchens are usually of rubber or linoleum. Both of these materials are produced in attractive colors and give excellent service when properly installed.

Wall Surfaces

Wall surfaces may be of Micarta, regular ceramic tile, glass, linoleum, composition sheet tile, Veos tile, or plain plaster painted. A choice of these materials usually depends upon the amount of investment the homemaker wishes to make. Painted walls are inexpensive and have the added advantage of being easy to redecorate frequently.

Linoleum, properly applied, makes a very excellent wall surface, and averages about 35 cents a square foot.

Standard ceramic tile is most ideal. But in houses already erected, the present plaster has to be removed starting from the studding up. The cost installed is approximately \$1.25 a square foot. It is, however, a most permanent, easily cleaned and satisfactory wall surface.

Veos Tile

A steel tile finished in porcelain enamel. It is light in weight and can be applied directly over the present plaster. A special foundation sheet of Celotex, grooved to take the turned-in edges of each tile, is nailed to the studding. Each tile is cemented to this foundation sheet, then the entire surface grouted in with cement, filling the spaces between the tiles. The approximate cost is \$1 per square foot.

Carrara Glass or Vitrolite

Colored glass having exceptional beauty, may be cemented to the old plaster or to composition board which has been securely nailed in place. Its cost of approximately \$1.50 per square foot prohibits use except in more costly homes.

Synthetic Sheet Tiles

There are several makes of material in this class that make practical wall surfaces for kitchens. They are available in a wide range of color and can be installed at prices ranging from 40 cents a square foot up.

Micarta

Micarta has the advantage of color, and is most satisfactory sheet type of wall covering. The cost of this material varies somewhat, with the color and conditions governing the installation. It is a most ideal wall covering which is cemented to existing walls. It combines serviceability, beauty, and practicability at not too great a cost. It is another Westinghouse product for kitchen use.

WESTINGHOUSE HOME BUILDING DEPARTMENT

The information given in this manual has been developed by the Westinghouse Home Building Department—during years of research and practical experience in home installation—and is now in general use by the trade, and has national acceptance.

We hope this information will prove valuable to you in developing plans for your clients' kitchens. If we can be of further service to you, don't hesitate to write us. We welcome the opportunity to help you with special problems.

Home Building Department

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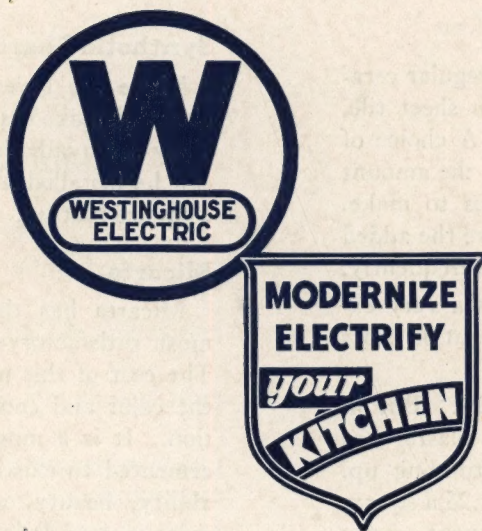
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